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Summary Figures on Income, Expenditures, and Personnel of Hospitals

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THE degree to which a hospital may render community service is conditioned by the availability of its facilities to the members of the general population. Availability, in turn, depends in a considerable measure on amount of support from sources other than payments by patients, since a large proportion of those needing hospital care are unable to assume the full cost. Consequently, a description of facilities accessible to various groups of the population is not complete without information not only on the number of hospitals and their combined capacity but also on the financial resources of the hospitals. It was to secure data of the latter type particularly that the United States Public Health Service conducted a financial inquiry into all places locally regarded as hospitals which in 1935 offered over-night care to sick or injured persons.

This inquiry, known as the 1935 Business Census of Hospitals, has been the topic of two earlier reports: one dealing with the origin, character, and progress of the study,[1] the other describing the financial support of voluntary hospitals.[2] Before considering the data which form a basis for this paper, however, a brief summary, pertaining to source material, definition of terms, and method of analysis, is presented.

The Authors

● Dr. Joseph W. Mountin, Surgeon, U. S. P. H. S., Elliott H. Pennell, Associate Statistician, and Emily Hankla of the U. S. Public Health Service, conducted the Business Census of Hospitals and compiled the statistics relating thereto, as a part of the National Health Inventory.

Census of Hospitals and the National Health Inventory

The Census of Hospitals was carried on as part of the National Health Inventory, a project of the United States Public Health Service financed by a grant of funds from the Works Progress

From the Division of Public Health Methods, National Institute of Health. The study was conducted in connection with the National Health Inventory. Basic data were assembled under the direction of Wilhelm Reitz.

[1] Mountin, Joseph W.: Business Census of Hospitals, Hospitals, Vol. 10, No. 11, November, 1936.

[2] Pennell, Elliott H., and Mountin, Joseph W.: The Financial Support of Nongovernment Hospitals as Revealed by the Recent Federal Business Census of Hospitals, Hospitals, Vol. 11, No. 12, December, 1937.

Administration. The schedule form, prepared in cooperation with the United States Bureau of the Census, was so arranged as to provide for the collection of income, expenditure, and employment statistics which could be used in the 1935 Census of American Business.

The task of defining limits for the field of inquiry was a difficult one. Even the term "hospital" has many connotations. Institutions which are dissimilar in many essentials may deliver service included under the variety of activities known as hospital care. Provision may be made for acute medical and surgical conditions, mental and nervous disorders, and disabilities requiring facilities merely for convalescence and rest. Moreover, the physical plants, staff organizations, and financial resources of the places that accept patients for bed care show great diversities. At one end of the scale are the well-equipped and properly supervised institutions, and at the other extreme emergency stations and nursing homes for which the term "hospital" is more a courtesy than a description.

Census Included Establishments for the Care of the Sick Not Listed as Hospitals

An initial step in conducting the Census was the preparation of a list of all places in the continental United States which in 1935 were organized to provide bed care for sick or injured persons. Through the cooperation of the several agencies which regularly collect information on hospitals, it was possible to extend the enumeration to many establishments which were believed to be providing some bed care but whose names did not appear in any of the several hospital registers.[3] A blank schedule for recording information was mailed to each one listed.

[3]The names and certain descriptive data for many hospitals in addition to those listed in the respective registers were supplied by the American Medical Association, the American College of Surgeons, Modern Hospital, and state lists.

Correspondence received from several hundred places to which schedules were sent indicated that they should be excluded from the estimate of total hospital facilities for the United States. Certain of these proved to be mere first aid stations; others submitted evidence to show that the services offered were not those commonly associated with hospitals even though the term be used in its broadest sense; still others reported that they had closed or had ceased to accept patients. After these had been deleted, there remained on the basic list the names of 8,107 hospitals which afforded accommodations expressed by approximately 1,118,000 beds. A total of 5,083 of these hospitals, representing an aggregate of about 944,000 beds, returned schedules which contained at least some items of usable information.

Separating the Hospitals Into Three Medical Types

Predominant type of service rendered and economic interest of the sponsoring agency appeared to be important factors influencing the financial picture of hospitals; hence distinctions were made on these bases. In the analyses presented in this report, hospitals have been separated into three medical types: general and special,[4] mental, and tuberculosis. The replies received from infirmary units of schools, prisons, almshouses, and other institutions indicated that many superintendents could not separate financial and personnel figures of such units from the totals for the parent institution. It was therefore decided to omit from this analysis data from 560 institutional hospital units, thus reducing the basic list from 8,107 to 7,547 hospitals.

[4]"Special" hospital as herein used refers to those furnishing types of care which are closely identified with general medical and surgical service. These hospitals include maternity, convalescence and rest, industrial, isolation, eye-ear-nose-throat, orthopedic, children's, and others offering similar specialized types of care. Mental and tuberculosis hospitals are given separate classification.

Table 1

Estimated percentage of total hospitals and hospital beds included in the group of hospitals reporting financial data to the 1935 Census of hospitals

Hospital control	*Estimated percentage of hospitals and beds included in the reporting group of hospitals of different medical types*					
	General and special hospitals		*Mental hospitals*		*Tuberculosis hospitals*	
	Hospitals	*Hospital beds*	*Hospitals*	*Hospital beds*	*Hospitals*	*Hospital beds*
All hospitals	62	80	68	88	73	82
Federal	95	91	100	100	95	99
Other governmental	72	91	83	88	78	84
Nonprofit	71	80	73	74	76	82
Proprietary	43	49	45	44	47	45

Table 2

Estimated total expense,[1] expense per bed, and percentage devoted to specified uses for hospitals of different medical type and control

Medical type and control of hospitals	*Number of hospitals*	*Number of hospital beds*	*Estimated annual expenses*			*Percentage of expense devoted to specified use*	
			Total (add 000)	*Per bed*	*Per average patient*	*Payroll*	*Other*
All hospitals[2]	7,547	1,084,550	$734,659	$ 677	$ 834	48.6	51.4
General and special[3]	6,332	477,674	513,039	1,074	1,626	48.6	51.4
Federal	289	52,581	56,825	1,081	1,452	67.7	32.3
Other governmental	684	106,387	90,394	850	1,071	55.7	44.3
Nonprofit	2,857	261,804	313,749	1,198	1,991	44.3	55.7
Proprietary	2,502	56,902	52,071	915	1,769	41.4	58.6
Mental	682	535,249	166,193	310	324	49.0	51.0
Federal	27	26,436	19,349	732	776	66.2	33.8
Other governmental	331	487,170	127,405	262	274	46.7	53.3
Nonprofit	59	10,941	7,726	706	869	46.4	53.6
Proprietary	265	10,702	11,713	1,094	1,741	47.2	52.8
Tuberculosis	533	71,627	55,427	774	901	48.0	52.0
Federal	19	4,150	4,868	1,173	1,394	65.2	34.8
Other governmental	306	52,017	39,265	755	834	48.2	51.8
Nonprofit	126	11,662	8,700	746	994	40.3	59.7
Proprietary	82	3,798	2,594	683	1,091	38.4	61.6

[1]Exclusive of depreciation.
[2]All hospitals except infirmary units of institutions are included in this total even though they may not be registered by the American Medical Association.
[3]Exclusive of mental, tuberculosis and institutional hospitals.

Two Groups of Governmental Hospitals

Governmental hospitals of each medical type have been divided into two groups, those under Federal control and those administered by state and local governments which are referred to as other governmental. Likewise, the voluntary institutions have been described as nonprofit and proprietary, according to the financial plan under which they are operated. Under a nonprofit arrangement, the controlling agency derives no personal or corporate gain from the enterprises while under a proprietary plan, such profits as can be accumulated become the possession of the owner or operator.

Hospitals Which Were Represented in the Schedules Filed

Schedules filed with the Census describe 63 per cent of the hospitals, representing 85 per cent of the total bed capacity, for the continental United States.[5] The percentages for each of the classifications used in this paper are presented in Table 1. Very few Federal hospitals failed to report while hospitals controlled by state or local governments and by nonprofit associations were more completely represented than the proprietorially owned regardless of medical type.

In an effort to present the total income, expense, and personnel figures for all general and special, mental, and tuberculosis hospitals, estimates were prepared for each subdivision by multiplying the reported totals by the ratio of beds in all hospitals to beds in those hospitals reporting data. The resulting approximations are regarded as sufficiently accurate to be used in making broad comparisons or indicating general relationships.

Expenditures of Hospitals

Excluding infirmary units of institutions, there were, during the year 1935, 7,547 places in the continental United States which afforded bed care that might be classified as hospital service. These places, hereinafter designated as hospitals, maintained a total of 1,084,550 beds and spent approximately $734,500,000. Expenditures for the different medical type and control groups are shown in Table 2.

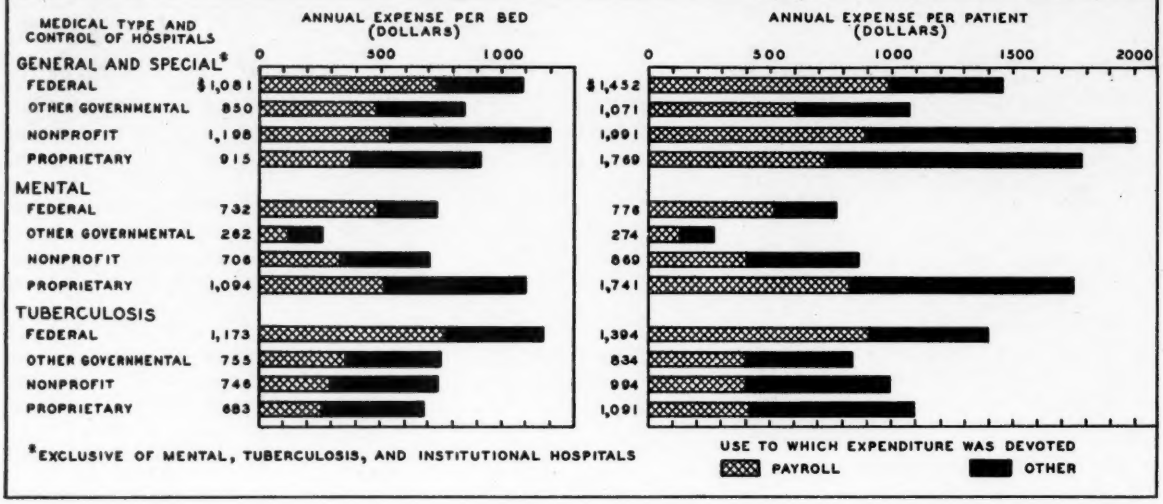
Predominant Medical Type of Institutions

The general and special hospitals,[6] of which there were 6,332 with 477,674 beds, were the predominant medical type in actual numbers and in

[5]Of the 7,547 hospitals remaining on the basic list after institutional units were excluded, 5,944 were registered with the American Medical Association. The importance of the registered group is more clearly demonstrated when it is noted that 1,053,977 of the 1,084,550 beds in all hospitals were found in the registered group. Hospitals which had failed to meet the requirements of the Association or had not applied for its approval made up about one-third of the proprietary hospitals listed but only a very small fraction of the hospitals in the other control groups.

[6]See footnote 5 for definition of special hospitals.

FIGURE 1 AVERAGE ANNUAL EXPENSE PER BED AND PER PATIENT FOR HOSPITALS OF DIFFERENT MEDICAL TYPE AND CONTROL



expenditures. They spent over 513 million dollars, or almost 70 per cent of the total, although they had fewer beds than the mental hospitals. Of all hospitals giving general or special care, the nonprofit group furnished the most beds and spent the largest sum, nearly 314 million dollars. While numerous, the proprietary hospitals were generally small in bed capacity, and their expenditures were correspondingly low, being only 52 million dollars during the year.

How Average Costs Were Measured

Average costs were measured in terms of rated bed capacity and total average daily census. (See table 2 and figure 1.) The average expenditure per bed was considerably greater for general and special hospitals under either Federal or nonprofit control than for those under proprietary agencies or state and local governments. Based on occupied beds, however, the figures are different. Annual costs per patient were over 20 per cent higher in proprietary hospitals which had an average occupancy of approximately 50 per cent than in the Federal hospitals with an average occupancy of about 75 per cent. Another factor, tending to obscure genuine variations is that expenses of out-patient departments were included in the reported totals from which unit costs were computed. This affected particularly the nonprofit and "other governmental" institutions. Moreover, in Federal hospitals, all medical, surgical, and nursing services are charged to the hospital, whereas in the voluntary institutions, physicians and surgeons on the staff and special nurses are paid directly by the patient. Even in hospitals of local governments attending physicians are apt to contribute services. These figures, therefore, are only roughly comparable. To determine whether any of the differences are indicative of variations in character of service or in management, a thorough investigation and appraisal of hospital service would be necessary.

Hospitals for Mental and Nervous Patients

The data available indicate that hospitals established for the care of mental and nervous patients numbered 682 in 1935, had 535,249 beds,[7] and made annual expenditures in the neighborhood of 166 million dollars. About half of the mental hospitals, containing over 90 per cent of the beds, were under the control of state and local governments. Moreover, 27 Federal hospitals included 5 per cent of the beds. These figures immediately suggest that the mental hospitals of nongovernmental control were small though comparatively numerous.

Estimated Annual Expense Per Bed in Nervous and Mental Hospitals

The estimated annual expense per occupied bed for state and local mental hospitals was $274 as contrasted with $776 for Federal, $869 for nonprofit, and $1,741 for proprietary mental hospitals. Thus the annual cost per average patient in the proprietary hospitals was over six times that in the state and local institutions. This is not surprising in view of the well recognized fact that the proprietary mental hospitals care principally for the well-to-do and consequently provide a more luxurious type of service.

[7]These hospitals, it should be pointed out, did not represent the total accommodations for mental patients since some were found in general hospitals.

Tuberculosis Hospitals

The 533 hospitals, which existed primarily for tuberculosis patients, had 71,627 beds[8] and expended approximately 55 million dollars during the year. As in the case of the mental hospitals, state and local governments dominate in the control of hospital facilities for the tuberculous.

Cost per bed for the tuberculosis hospitals was highest in the 19 Federal hospitals. The beds under proprietary auspices seemed to entail slightly less expense than those under nonprofit or "other governmental" control, but as a larger percentage of them was unoccupied, the annual cost per patient was greater in the proprietary than in any other control group except the Federal.

To simplify presentation of expense distribution, only two divisions, "payroll" and "other" are used. Included in "other" are supplies, maintenance costs, interest, taxes, and miscellaneous expenditures. Inasmuch as a considerable proportion of the hospital reports failed to provide data on plant assets and depreciation, no estimates for these costs have been included in the total expense listed in the table. A factor operating during the study year, which tended to raise proportionate expenditures for payrolls above their accustomed level, was the granting of money by the Federal Emergency Relief Administration for the expressed purpose of employing extra nurses from relief rolls.

[8]These figures do not include beds for tuberculous patients which were located in hospitals of other medical types; such beds are included in the totals of the parent institution.

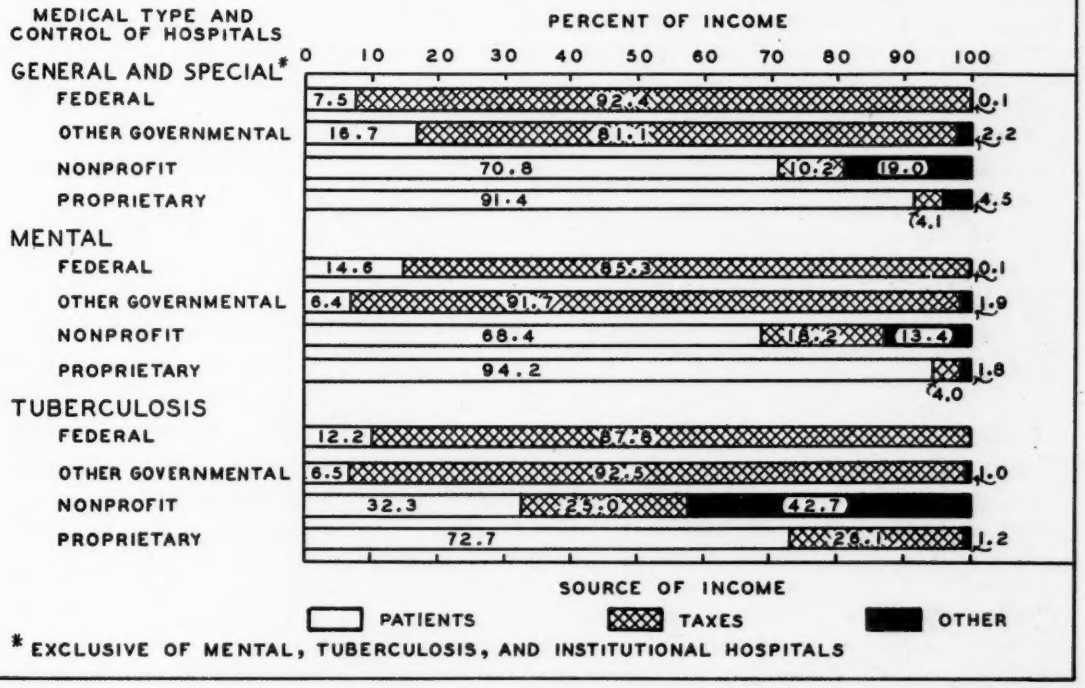
What the Federal Hospitals Spent

On the basis of reported costs, Federal hospitals spent, in general, a larger proportion of their revenue for payrolls than for other purposes, while the reverse was true of the voluntary institutions. Other governmental hospitals except those for mental patients spent comparatively more for payrolls than the nongovernmental hospitals. Although cost per bed differed widely among state and local, non-profit, and proprietary mental hospitals, the proportionate amounts of such expenditures which were allocated to "payroll" and to "other" were practically the same for the three groups of hospitals. A further division of expenses showed that proprietary hospitals with their additional burden of taxes and interest on capital investment, spent relatively more on miscellaneous items, while the nonprofit institutions put the largest percentage into supplies and maintenance.

Hospital Income

The two principal sources of financial support,

FIGURE 2 PERCENTAGE DISTRIBUTION OF INCOME, ACCORDING TO SOURCE, FOR HOSPITALS OF DIFFERENT MEDICAL TYPE AND CONTROL



as is shown in figure 2 and table 3, were fees from patients and payments by taxing bodies. Supplementary revenues, combined in this report under "other," were income from endowment funds, bequests not paid into endowment funds, community chest contributions, income in kind, funds created under group benefit plans of various types, and miscellaneous receipts. It is believed that in some instances income from governments and from hospital benefit plans which was paid on an individual basis was reported by hospitals as income from patients.

Over one-half of the total amount available to all general and special hospitals was obtained from patients, almost a third from taxes, and about an eighth from other sources. The proprietary establishments, especially, depend for their income chiefly on patients' fees. Nonprofit hospitals, featuring general and special service, though dependent on patients for fully 70 per cent of their income, have greater supplementary resources, consisting of governmental appropriations and of the varied revenues included under "other." Assistance from endowments plays a surprisingly unimportant part. Although institutions organized on a nonprofit basis possess most of the total endowment, their income from this source (included under "other" in Table 3) amounted to only 6 per cent of their total receipts. Another 13 per cent is accounted for by gifts, dues from group benefit organizations, and a wide variety of miscellaneous contributions. The situation varies, of course. A few hospitals are largely supported by endowments, whereas others are maintained entirely by contributions of some organization, the members of which may or may not be beneficiaries. While philanthrophy is not a dominant factor in meeting operating costs, the importance of these funds should not be minimized, for often a relatively small sum may provide increased care or reduced charges for patients. Some church hospitals have an additional advantage in the services contributed by members of religious orders, but no account is being taken of such factors in this report. If the availability of facilities to the lower income groups of the population depends on means of hospital support, these figures have added interest since resources for balancing budgets should be an important indication of the extent to which low rates are available.

Governmental hospitals, as might be expected, obtained most of their funds from taxes. According to the reports, no Federal hospital and only a few hospitals under the control of state and local governments had endowment funds. Federal general and special hospitals received about 92 per cent of their funds from the national government, over 7 per cent from patients, and about one-tenth of 1 per cent from other sources, whereas the state and local hospitals received about 81 per cent from governmental agencies including sometimes assistance from the Federal govern-

Table 3

Estimated total income and percentage received from specified sources for hospitals of different medical type and control

Medical type and control of hospitals	*Number of hospitals*	*Number of hospital beds*	*Estimated total income (add 000)*	*Per cent of income from specified sources*		
				Patients	*Taxes*	*Other*
All hospitals[1]	7,547	1,084,550	$727,452	44.0	46.4	9.6
General and special[2]	6,332	477,674	505,037	56.2	31.5	12.3
Federal	289	52,581	56,825	7.5	92.4	0.1
Other governmental	684	106,387	90,394	16.7	81.1	2.2
Nonprofit	2,857	261,804	303,176	70.8	10.2	19.0
Proprietary	2,502	56,902	54,642	91.4	4.1	4.5
Mental	682	535,249	167,141	16.9	80.9	2.2
Federal	27	26,436	19,349	14.6	85.3	0.1
Other governmental	331	487,170	127,405	6.4	91.7	1.9
Nonprofit	59	10,941	7,494	68.4	18.2	13.4
Proprietary	265	10,702	12,893	94.2	4.0	1.8
Tuberculosis	533	71,627	55,274	14.2	78.5	7.3
Federal	19	4,150	4,868	12.2	87.8	...
Other governmental	306	52,017	39,265	6.5	92.5	1.0
Nonprofit	126	11,662	8,398	32.3	25.0	42.7
Proprietary	82	3,798	2,743	72.7	26.1	1.2

[1]All hospitals, except infirmary units of institutions, are included in this total even though they may not be registered by the American Medical Association.
[2]Exclusive of mental, tuberculosis and institutional hospitals.

Table 4

Estimated total number of hospital employees and the distribution of employees according to pay status in hospitals of different medical type and control[1]

Medical type and control of hospitals	Hospital facilities: Number of hospitals	Hospital facilities: Number of hospital beds	Total employees of all types for a single month: Number	Total employees of all types for a single month: Per hospital bed	Distribution of employees according to pay status: Paid full time: Number	Paid full time: Per cent of total	Paid part time: Number	Paid part time: Per cent of total	Receiving maintenance only: Number	Receiving maintenance only: Per cent of total
All hospitals	7,547	1,084,550	488,298	.45	429,345	87.9	15,215	3.1	43,738	9.0
General and special[2]	6,332	477,674	359,077	.75	302,868	84.3	13,283	3.7	42,926	12.0
Federal	289	52,581	32,279	.61	31,397	97.3	868	2.7	14	[3]
Other governmental	684	106,387	66,723	.63	59,737	89.5	1,840	2.8	5,146	7.7
Nonprofit	2,857	261,804	228,064	.87	184,410	80.9	8,051	3.5	35,603	15.6
Proprietary	2,502	56,902	32,011	.56	27,324	85.3	2,524	7.9	2,163	6.8
Mental	682	535,249	96,925	.18	95,613	98.7	792	.8	520	.5
Federal	27	26,436	9,330	.35	9,227	98.9	102	1.1	1	[3]
Other governmental	331	487,170	76,424	.16	75,779	99.2	332	.4	313	.4
Nonprofit	59	10,941	4,564	.42	4,370	95.8	78	1.7	116	2.5
Proprietary	265	10,702	6,607	.62	6,237	94.4	280	4.2	90	1.4
Tuberculosis	533	71,627	32,296	.45	30,864	95.6	1,140	3.5	292	.9
Federal	19	4,150	2,288	.55	2,190	95.7	94	4.1	4	.2
Other governmental	306	52,017	23,750	.46	22,936	96.6	651	2.7	163	.7
Nonprofit	126	11,662	4,919	.42	4,564	92.8	266	5.4	89	1.8
Proprietary	82	3,798	1,339	.35	1,174	87.7	129	9.6	36	2.7

[1]Employment figures represent data for a single month.
[2]Excluding mental, tuberculosis, and institutional hospitals.
[3]Less than .05

ment, 17 per cent from patients, and 2 per cent from other sources.

Mental hospitals as a group obtained 81 per cent of their total income from the tax funds and 17 per cent from patients' fees. An unusually high degree of support from patients characterized the proprietary institutions, but it should be emphasized that they contained only 2 per cent of the beds in mental hospitals.

Three-Fourths of the Income of Tuberculosis Hospitals Derived from Governmental Appropriations

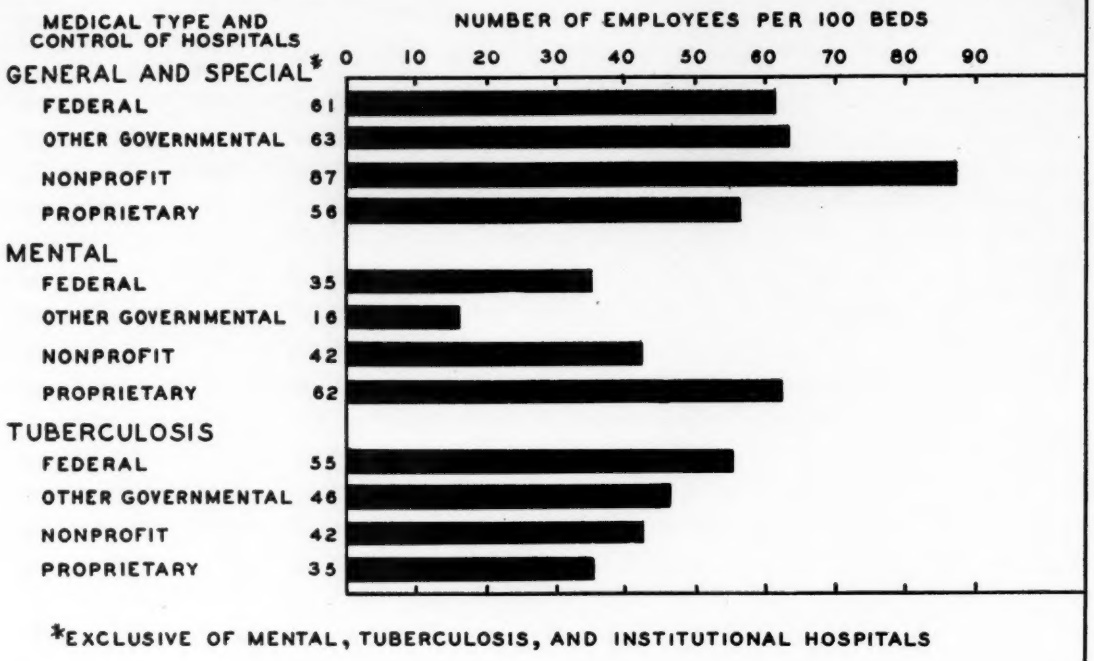
Governmental appropriations provided more than three-fourths of the total income of all tuberculosis hospitals, patients contributed about 14 per cent, and other sources the remaining 7 per cent. Even the proprietary sanatoria derived over one-fourth of their revenue from tax funds and only 73 per cent from patients. Donations are a definite factor in the support of nonprofit hospitals in the tuberculosis field, sources other than patients or taxes supplying about 43 per cent of their total income. The gifts included here, it should be noted, came from organizations, such as tuberculosis associations, community chests, or welfare federations, more often than directly from individuals. About a third of the income of nonprofit hospitals was obtained from patients and approximately a fourth from tax funds.

Personnel and Payrolls

Each hospital supplied, in addition to the gross sum spent for payrolls during the year, detailed information on types of employees and personnel costs for a single month, usually October. According to estimates based on these reports, the hospitals in the continental United States paid more than 30 million dollars in salaries during a single month. On the payroll for that month were approximately 429,345 full-time and 15,215 part-time employees, besides 43,738 who received maintenance only.

The estimated number of employees paid on a full-time and on a part-time basis and those receiving maintenance only for hospitals in different medical and control classes are presented in Table 4. While facilities, as expressed by total beds, were greater in mental hospitals than in those of other medical types, opportunities for employment were provided to a far larger number of persons by general and special hospitals. In tuberculosis hospitals only about one-third as many persons were employed as in mental and less than one-tenth as many as in general and special hospitals. Nearly two-thirds of all employees in general and special hospitals were located in nonprofit hospitals, whereas about three-fourths of the personnel of mental and tuberculosis hospitals were in hospitals controlled by state and local governments.

FIGURE 3 NUMBER OF EMPLOYEES PER 100 BEDS FOR HOSPITALS OF DIFFERENT MEDICAL TYPE AND CONTROL



*EXCLUSIVE OF MENTAL, TUBERCULOSIS, AND INSTITUTIONAL HOSPITALS

Ratio of Employees to Hospital Beds

The ratio of number of employees to number of hospital beds was highest for general and special hospitals, lowest for mental, and in a middle position for tuberculosis hospitals. When the general and special hospitals were separated according to control, as is depicted in figure 3, the nonprofit group showed the highest ratio of employees to beds, the proprietary the lowest, and the two governmental groups ratios only slightly higher than the proprietary. Of the group of mental hospitals, those operated by state and local governments showed the lowest ratio, while the ratio was highest for those proprietorially owned. Much less variation was shown between control groups for tuberculosis hospitals, the proportion of employees per bed being highest for Federal hospitals and lower for other governmental, nonprofit, and proprietary, in the order listed.

Employees who received maintenance only represented a very small proportion of the total employees in mental and tuberculosis hospitals but they were of considerable importance in the general and special hospitals other than those under Federal control. Part-time paid employees made up a relatively higher proportion of the total personnel in proprietary hospitals than in those under other types of control, but the percentage was not large.

Variable in Payroll Costs in Various Classes of Hospitals

Financial data presented in Table 5 indicates considerable variation in the payroll costs in different classes of hospitals. When related either to the number of paid employees or to the number of hospital beds, by far the highest average amounts were paid by Federal hospitals regardless of medical type. Further analyses of the basic data which are not reported here indicate not only that somewhat higher salaries were paid by Federal hospitals to employees in the different professional classifications, but also that there were in these hospitals a relatively large number of physicians and surgeons and very few low paid interns and student nurses. The latter represented a definite factor in the personnel of other hospitals, particularly in those operated by state and local. governments and by nonprofit organizations.

The average pay per employee was somewhat higher for mental and tuberculosis hospitals than

for general and special, while the opposite was true of payroll costs per hospital bed. State and local governmental hospitals of all medical types paid somewhat more per employee than did those operated by voluntary agencies. The average amount paid by nonprofit hospitals was very nearly the same as that paid by proprietary hospitals.

Where the Average Payroll Cost Per Bed Was Lowest

The average payroll cost per hospital bed was lowest for proprietary hospitals except in the mental group where decidedly lower figures were shown for the nonprofit and other governmental hospitals.

Summary

The United States Public Health Service conducted as part of the Census of American Business of 1935 an inquiry into the financial structure and opportunities for employment in hospitals of the continental United States.

Most of the funds for operating costs of hospitals are derived either from patients' fees or from governmental appropriations. Contrary to the assumption of many people that nonprofit hospitals are largely supported by the contributions of public spirited and generous benefactors, voluntary donations are a minor factor in defraying operating costs except in the small group of nonprofit tuberculosis hospitals. General and special hospitals received more than half of their funds from patients, about a third from tax funds, and about one-eighth from other sources. The responsibility of financing long-term care for tuberculosis and mental patients has been largely taken over by government agencies.

Governmental hospitals, especially those under Federal control, spent more for payrolls than for supplies and maintenance, while the opposite was true of the voluntary hospitals.

Nonprofit hospitals, closely followed by those under the control of state and local governments, led all others in providing opportunities for employment. The average payroll cost per paid employee was higher in governmental, particularly in those operated by the Federal government, than in nongovernmental hospitals. The payroll cost per hospital bed was highest in Federal hospitals and lowest in hospitals operated by state and local governments while voluntary hospitals occupied a middle position.

To one interested in public health the significance of the financial data collected by the 1935 Census of Hospitals lies chiefly in the light it may throw on the availability of hospital care as revealed by the sources of financial support.

Table 5

Estimated total number of paid employees, total payroll cost, payroll cost per paid employee and payroll cost per hospital bed in hospitals of different medical type and control[1]

Medical type and control of hospitals	*Hospital facilities*		*Total paid employees for single month*[3]	*Payroll costs per single month*		
	Number of hospitals	*Number of hospital beds*		*Total (add 000)*	*Per paid employee*	*Per hospital bed*
All hospitals	7,547	1,084,550	444,600	$30,062	$68	$28
General and special[2]	6,332	477,674	316,200	20,779	66	44
Federal	289	52,581	32,300	3,469	107	66
Other governmental	684	106,387	61,600	4,350	71	41
Nonprofit	2,857	261,804	192,500	11,343	59	43
Proprietary	2,502	56,902	29,800	1,617	54	28
Mental	682	535,249	96,400	7,072	73	13
Federal	27	26,436	9,300	1,142	123	43
Other governmental	331	487,170	76,100	5,206	68	11
Nonprofit	59	10,941	4,500	299	66	27
Proprietary	265	10,702	6,500	425	65	40
Tuberculosis	533	71,627	32,000	2,211	69	31
Federal	19	4,150	2,300	281	122	68
Other governmental	306	52,017	23,600	1,562	66	30
Nonprofit	126	11,662	4,800	288	60	25
Proprietary	82	3,798	1,300	80	62	21

[1]Employment figures and payroll costs represent data for a single month.
[2]Excluding mental, tuberculosis, and institutional hospitals.
[3]Including both full- and part-time personnel.

Cancer Clinic in the General Hospital

FRANK E. ADAIR, M.D., New York City

ALTHOUGH cancer is the Number Two Killer, it is today the Number One Problem of the medical profession. This is true for two reasons: first, because cancer is on the increase as a result of a larger proportion of our population reaching adult life, and secondly, because of the frequent association of excruciating agony with this disease in its last stages.

Every year 145,000 Americans pass away because of the ravages of cancer. Such a loss, year in and year out, has lifted this disease out of the realm of being a major problem for the medical profession into becoming a national tragedy and a problem for all our citizens. This year, for the first time in the history of the United States, the cancer problem has been elaborately and rather competently discussed in the committees of Congress. Partly as a result of certain lines of argument employed, such as the fact that the Seventy-fifth Congress appropriated $2,631,000 for the eradication of tuberculosis in live stock, $681,000 to stamp out cattle ticks, $846,000 for cotton research and $507,000 for forest research, Congress was prevailed upon to appropriate $750,000 for a "National Cancer Institute" at Bethesda, Maryland, and also an annual grant of $700,000 for cancer research.

It remains to be seen how successful the United States Public Health Service will be, with comparatively little experience in the cancer field, in obtaining proper personnel for such research; how ably the research will be correlated and conducted; how competent and wise will be the expenditure of such a large amount of money for this purpose. By such an appropriation, Congress has laid the problem of cancer research on the door-step of the governmental agencies. The development and results of this research will be studied by sympathetic as well as critical observers, by the members of Congress, the entire medical profession, and by the American people as a whole, who will pay the bill through high taxes. We hope that enormous success will crown the efforts of our Public Health Service.

Promotion of Nation-Wide Education on Early Signs of Cancer

In the meantime, as cancer research is being further developed, by private as well as governmental agencies, there are certain paths which may be pursued with definite success. The first one is that of effective, nation-wide education on a few of the early and simple signs of cancer. This education of the masses offers more hope than any other single activity. If the American people will bother to learn only a few of the early signs of cancer, and act with intelligence and expedition on this information, the annual deaths from this disease will be cut in half during our generation. In this connection, it is interesting to note that in certain types of cancer, on or near the body surface, such as skin, lip, mouth, and breast cancer, there is evidence that the public is coming to the doctor earlier than ever before; and in these special fields, greater numbers have opportunity for cure than previously.

The American Society for the Control of Cancer is bending every effort for mass education on the early signs of cancer. This educational activity is developed and handled through the channels of the medical profession itself in nearly every city, county, and hamlet in America. One year ago the Women's Field Army of the American Society for the Control of Cancer was organized. As a result of one year's effort, 108,000 American women were enrolled as a mighty army, to disseminate knowledge on cancer to women. This army is destined to become a powerful factor in cutting down the death rate in the sex most affected by the ravages of this disease. The sole object of the American Society for the Control of Cancer is to get the patient into the hands of the physicians at a time when the cure rate is still high.

Organization of the Medical Profession in the Treatment of Cancer Patients

The second path to be pursued is that of the organization of the medical profession to properly care for the cancer patient, and in this field the American College of Surgeons has been the outstanding guiding influence; it is the only nationally organized body making an aggressive drive to educate the doctor on cancer. Because the major share of cancer is treated by surgeons,

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and due to the realization that surgeons who perform cancer surgery should be better educated on the pathologic processes of the neoplastic diseases, and better trained in aspects peculiar to cancer surgery, the College has developed cancer clinics.

From the standpoint of medical organization, there is more than one way for the profession to attack the cancer problem. In the first place, there is the special cancer hospital. Due to the incidents of suitable cancer patients for hospitals, to the high cost of providing specialty hospital buildings, equipment, radium, etc., to the difficulty of obtaining competently trained personnel, and to the distances necessary for cancer patients to travel to such special cancer centers, it would seem that such a cancer center offers many special problems peculiar to such institutes. The special cancer hospital can only be developed in a large center of population, where clinical material is plentiful without large travel costs on the part of patients. A certain number of such hospitals are highly desirable; here cancer research can be pursued under the most favorable conditions. Ewing once said that ten such special cancer hospitals, costing ten million dollars each, strategically situated through America, offered our front line of defense. They represent the leaders of thought on diagnosis, modern treatment, and cancer research. On the other hand, the cost of building, equipping, and maintaining such special cancer hospitals, in a huge country such as America, does not appear to be the best practical solution for our cancer problems.

Greenough-Crowell Plan

After an enormous amount of study of the problem of organization and care of the cancer patient, the College of Surgeons adopted the Greenough-Crowell solution as being more practical, because it was one which could be applied to the general hospitals already in existence. This plan adopted by the College has the virtue of not requiring a new building program, which would be tremendously costly. It would utilize the laboratory and clinical services already in existence in the general hospital. The scheme has the virtue of producing a group of professional men, especially interested and equipped to care properly for the cancer patient.

The College of Surgeons has suggested through hospital authorities that every case of cancer distributed through the various services of the general hospital should be brought to the cancer clinic of that general hospital for consideration, consultation, diagnosis, and outline of therapy by a special professional group. By this means, the patient receives the benefit of group opinion and study. By the pooling of the cancer material and the cancer work of the general hospital among such an interested group, an error of judgment by one working alone is apt to be overcome by a careful, unhurried presentation of the case to the tumor board. The board deliberates over the many problems of pathology, radiation, and surgery presented by the complex cancer case. The College has definite requirements as the minimum of x-ray and radium equipment for an approved cancer clinic. The larger general hospitals, by means of the cancer clinic, are rapidly developing a group of their own staff who are competent to make correct diagnoses and deliver the most modern form of therapy. In 1928, there were only 13 institutions in America which measured up to the standard of equipment and trained personnel required by the American College of Surgeons for an approved cancer clinic. Today there are 240 cancer clinics which meet the rigid requirements of the College, and today the cancer clinic is filling an urgent need in our general hospitals all over the land.

The requirements of the College of Surgeons for a complete cancer clinic are, first, a certain type of organization and secondly, a fixed minimum amount of equipment.

Organization

The Cancer Committee meet at least once a week for a consideration of the cancer patients in the hospital. This committee usually has as its chairman a surgeon, and as its secretary, a radiologist. The personnel consists of a surgeon, pathologist, internist, radiologist, and those specialists whose field makes them particularly fitted for instrumentation of body cavities such as bronchoscopist, oesophagoscopist, and genito-urinary, rectal, and gynecological specialists. All cancer patients are sent to this Cancer Committee for consultation on diagnosis and outline of treatment. The secretary keeps the records of each case presented and gives progress reports on cases previously treated at the meetings. Frequently, the social service worker sees that the patients are fully instructed and that they meet their appointments.

Equipment

The minimum requirements for equipment are the possession of a high-voltage x-ray machine, a low-voltage x-ray machine, 200 milligrams of radium. My humble opinion is that 150 milligrams of radium placed in the flexible units will more competently service the cancer lesions than 200 milligrams placed in the less modern applicators.

It is understood the personnel must be properly trained to carry out the therapy decided on by the committee.

Averse Public Opinion to Special Cancer Hospital

Such a scheme as the cancer clinic in the general hospital seems to possess many advantages. The hospital building is already standing and only minor building changes become necessary. The professional staff is already at work—and only a few adjustments will bring the Cancer Committee up to a definite working unit. There is a psychological advantage of treating cancer in the general community hospital for two reasons—first, every citizen goes to the general hospital for pneumonia or for an operation and it is not set apart in their minds as a hospital to be especially dreaded; and secondly, the thought of having Mother leave home and family to be treated in a far away city by a strange doctor for a lethal disease, is quite apt to be just that argument which will be responsible for Mother neglecting her cancer until it is beyond cure.

Those working in a special cancer hospital are conscious of the psychological disadvantage of suggesting that the patient go to a hospital known to be a cancer hospital. The average patient prefers a general hospital, or at least prefers not to know that they are in a special hospital for cancer. On the other hand, the advantage to the cancer patient of being in a hospital where everyone on the clinical, pathological, and nursing staff are specialists in cancer, is too obvious to need elaboration today. Specialists in tuberculosis, diabetes, cancer, arthritis, etc., have more than justified themselves.

There are, therefore, two well recognized opposing viewpoints, each possessing its advantages and its disadvantages.

Development of Cancer Treatment in Different States

Many individual states of the Union are now pondering which is the better method of taking care of the cancer patients of that state. New York State is in the process of attempting to work out the problem of properly caring for the cancer patient. As a rule, the patient who has no financial difficulties is able to seek and obtain proper care and treatment; on the other hand, the indigent patient living far from a cancer center, or a general hospital, possessing a cancer clinic, is at a disadvantage and here, in all likelihood, the state will step in and see that proper care, together with traveling expenses, will be given.

In effectively working out this problem of the cancer patient, much depends on the size of the state in which he lives. For a small state, the size of New Jersey or Connecticut, it seems to me that either one special cancer hospital, or a complete cancer clinic situated in a good general hospital, would be advantageous. Opposed to this is the problem of the large state, with a large scattered population such as New York, Pennsylvania, or Texas, where distances are great. It is my opinion that the population would get better cancer service if several well-equipped cancer clinics, strategically located in good general hospitals, were to be developed.

A question of practical importance is "Should all hospitals of 100 beds or over attempt to conduct a cancer clinic?" This question cannot be answered without inquiring into the organization of that particular hospital. In general, approximately half of the general hospital beds are for medical cases and half for surgical cases. There is also the obstetrics, orthopedic, and pediatric cases, so that the total number of cancer cases in a hospital of 100 beds is not, in all probability, more than eight at one time, if that many. A general hospital of 100 beds is usually not sufficiently large to maintain a good cancer clinic. To have a properly functioning cancer clinic, only a part of the staff personnel should be assigned to the cancer clinic; all the members of the staff cannot properly be members of the Cancer Committee. As a rule, I should assume that a general hospital of 200 beds would be the minimum number to support and develop a cancer clinic.

The question may be asked, "In what way can hospitals cooperate in the control of cancer?" It seems to me that where there are several small hospitals in a community, that a cancer committee can be formed from the personnel of the several hospitals. The personnel may be based on that required by the College of Surgeons for a cancer clinic. If great tact be used, the workings of this composite committee can become as free from dissension and can become as constructive and helpful as if the cancer committee were taken bodily from one hospital. Such a cancer committee has unusual opportunity for great good.

In certain communities, where the minimum requirements of personnel and equipment are not practical for a complete cancer clinic, it may be possible to develop a diagnostic cancer clinic.

The diagnostic cancer clinic functions in smaller communities with great advantage. It is, in reality, only a diagnostic cancer group who meet, consult, diagnose, and suggest details of treatment, but do not give the treatments. The patients are sent on to hospitals in larger communities for treatment. The diagnostic cancer group has worked out admirably in New Hampshire,

where there are eleven diagnostic cancer clinics and three fully equipped treatment clinics, all under a State Cancer Commission having an annual budget of $35,000. The doctor is paid a modest amount for diagnosing the case and if the patient is indigent, the State Cancer Commission sends him to one of the three treatment clinics.

In conclusion, I wish to make a plea for the greater and more general use of the cancer clinic organization as developed by the American College of Surgeons. It fits into the picture of the American hospitals. The surgical and radiation therapy of the general average of cancer cases can be greatly improved. As a rule, surgeons go too close to the cancer in removing it. Our surgery should be both more radical and more meticulous. If one studies the radiation methods employed today, he is shocked at the wide nonuse of what is now known to be modern irradiation treatment. Not enough sincere effort is put into the attempt to cure cancer. A live, aggressive personnel in the cancer clinic of every general hospital of 250 beds is highly desirable, and if this situation is developed, the cure rate for cancer patients in American hospitals will definitely rise.

Dr. R. C. Buerki Appointed Director of Study of the Commission on Graduate Medical Education

Dr. Robin C. Buerki, superintendent of the University of Wisconsin Hospital at Madison, and former president of the American Hospital Association, has accepted the position as director of study of the Commission on Graduate Medical Education. Dr. Buerki will be on leave of absence from the University of Wisconsin to conduct the study for the Commission.

The Commission on Graduate Medical Education was organized by the Advisory Board for Medical Specialties which is the coordinating advisory board for graduate medicine in the United States. It comprises a number of outstanding representatives of the national boards of specialists, hospitals, medical profession, medical schools, and agencies dealing with medical licensure.

The purposes of the Commission are to mobilize the best current opinions regarding advanced medical training and to formulate the educational principles which should guide hospitals, universities, medical societies, and examining bodies in their efforts to establish adequate standards in this phase of American medicine. The Commission will cooperate with the Council on Medical Education and Hospitals of the American Medical Association which is surveying the facilities for graduate medical training in this country and with the American College of Surgeons, which is studying the facilities for training in surgery. The results of such studies should be of great value to those bodies dealing with the evaluation of hospitals, laboratories, and methods of instruction beyond the usual undergraduate medical course.

At the present time any licensed physician may perform operations or carry out other procedures

Robin C. Buerki, M.D.

on patients without the necessity of having had the advanced training which is essential for the practice of a specialty. To protect the public from self-labeled specialists, twelve national boards for the examination and certification of those doctors who are qualified by training and experience in their respective fields have been created.

In addition to the proper training and certification of specialists, the problem of keeping every practitioner abreast of current knowledge regarding diagnosis, treatment, and prevention of disease presents many new educational problems for the profession, hospitals, medical societies, and universities. The Commission will study these aspects also as part of the entire problem of providing the highest possible quality of medical care for the entire population.

Hospital Pharmacy

T. C. DANIELS, Ph.D., Berkeley, California

UNTIL recent years the service of pharmacy in the hospital has received but little attention. The result of this, direct or otherwise is that only a limited number of hospitals today have what might be considered adequate pharmacy service. Through a new interest on the part of hospital authorities and the medical and pharmacy professions, hospital pharmacy has during the past few years made important advances. There is every indication that it will continue to improve both as regards the type and scope of its service.

The minimum standards as adopted by the American College of Surgeons[2, 3] at its meeting in Philadelphia in October, 1936, will necessitate many changes in existing hospitals and will in the end place pharmacy service in the hospital on a more satisfactory basis.

The size of the hospital does not in itself affect the service the pharmacy may give, as every hospital pharmacy has the opportunity of strengthening the relationship of medicine and pharmacy through rendering efficiently the service expected of the profession.

Duties of the Hospital Pharmacist

The duties of a hospital pharmacist are so varied that I wish to refer to them somewhat in detail.

1 The pharmacist must have full information on sources for obtaining dependable drugs and chemicals. This implies that he must be able to distinguish between "manufacturers of merit and those of questionable character," that he must know of manufacturers who maintain sufficiently adequate control to insure the supply of standard products.

2 In order to avoid economic loss he must know the standard units required for each substance that he purchases. By stocking only the units regularly in demand it is possible to operate efficiently with a much smaller stock of merchandise and a corresponding reduction in overhead expense.

3 The pharmacist must make certain that all unstable preparations are dated as to their expiration date. There should be a routine check of all products subject to rapid deterioration and where there is evidence of decomposition the product should be discarded and replaced with a fresh supply. The importance of this is frequently overlooked.

4 All medication in the emergency ward should be under the pharmacist's control. An approved antidote list should be available and the medicinals required for such emergency kept in good condition, ready for use. This requires regular inspection.

5 Laboratory reagents and stains should logically be under the control of the pharmacist and they require routine inspection to determine if they are in good order.

6 The storage and complete control of all biological preparations should be one of the pharmacist's responsibilities. Proper refrigeration facilities must be available for this and products that are "out-dated" should be promptly returned to the manufacturer for credit.

7 All ward medication chests should be under the direct supervision of the pharmacist and must be regularly checked. Products that have deteriorated should be confiscated and replaced with a fresh supply and a conscious effort should be made to keep the quantity of stock as low as is compatible with efficiency.

8 In most hospitals the pharmacist should be given the responsibility of training nurses in the simple pharmacy operations required of them. Such problems are exceedingly practical for the pharmacist and he is well qualified for such teaching.

9 The pharmacist should be responsible for and at least supervise the preparation and sterilization of all solutions intended for parenteral use. If possible a small room with filtered air should be provided for the purpose. Labels should clearly show the lot number and expiration date of the solution. All injectable solutions should be tested for sterility, pyrogenic properties and where the hydrogen ion concentration of the solution differs markedly from that of the tissues or environment where it is to be employed it should be buffered at the

The Author

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desired hydrogen ion level. There are several exceptions to this but in general such a procedure should be adopted. Furthermore unless a hypertonic or hypotonic solution is desired the concentration should be adjusted to make it isotonic.

The proper handling of all solutions for parenteral use requires special apparatus and technic and unless the facilities are available both as regards to equipment and personnel the manufacture of such preparations should not be attempted.

10 There is an excellent opportunity for reducing expenses in even a small hospital through making a careful study of the products that can be manufactured to advantage. All manufactured products requiring analysis should be analyzed and a complete record kept. In general, manufacture everything that can be properly handled.

Miscellaneous Responsibilities

11 A great deal of the hospital pharmacist's time is required in the supervision and control of the following:

a—The dispensing of drugs, chemicals, and pharmaceutical preparations

b—The filling and labeling of all drug containers issued to nursing units from which medication is to be administered

c—A semi-monthly inspection of all pharmaceutical supplies on nursing units

d—The dispensing of narcotic drugs and the keeping of a perpetual inventory

e—Specifications for purchase of all drugs, chemicals and pharmaceutical preparations Every hospital must use medicinals that will at least conform to the requirements of the U.S.P., N.F., or N.N.R.

It goes without saying that the hospital pharmacy should be provided with the space necessary to efficiently render the service expected. The pharmacist should be provided with proper office space for keeping records, correspondence, et cetera. A small laboratory should always be provided for experimental work even if it is to be used only for the development and preparation of special medication. In hospitals where a considerable amount of manufacturing is done a small control laboratory for analysis is essential.

The hospital pharmacist should have personal contact with the staff physicians in order to assist them with problems on prescriptions and therapeutics. Real cooperation on such problems will tend toward the rationalization of hospital therapeutics. Empiricism in the use of drugs has been the fashion for centuries and any advance toward rationalization must be worthy of encouragement. A library in which all of the standard reference works on pharmacy, chemistry, bacteriology, pharmacology, pharmacognosy, et cetera, are available to the medical surgical and nursing staffs, has been repeatedly shown to be indispensable to a hospital pharmacy. Dauer[3] states, "there is no phase of hospital practice more vital, nor no place in the hospital pharmacy more important than the reference library. To a great extent, the success or failure of a hospital pharmacy's service depends upon the knowledge and information available to the dispenser." The truth of the above statement has been thoroughly demonstrated to the complete satisfaction of a number of well qualified pharmacists, and I believe every hospital should give careful consideration to providing a suitable reference library for its pharmacy.

The medical staff of the hospital should expect from the pharmacist authentic information on new products available for medication. They may also expect an opinion as to their relative merits. This includes synthetics, proprietary preparations, biological products and methods for their administration. It very definitely implies that in order to offer the proper service the pharmacist must know more concerning the physical and chemical properties of medicinals than the physician. Failure in this can only mean that he is not qualified for his duties.

There should be a definite effort made to reduce the necessity for proprietary medication to a minimum. All proprietary products that do not show on the labels their composition and that are not a decided improvement on official products should find no place in a hospital pharmacy.

A Hospital Formulary will greatly aid the pharmacy service and will tend to discourage the use of "packaged prescriptions."

Every hospital should adopt a so-called "drug policy" that will at least conform to the standards as adopted by the American College of Surgeons. The adoption of a sound "drug policy" serves in the interest of the hospital and its patients and also to the mutual interests of the pharmacy and medical professions. The closer the cooperation between the two professions the better will be the services of each.

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The International Hospital Association

WHILE speeding west to attend the convention of the Association of Western Hospitals, I was greeted by a message announcing that I had been elected to the presidency of the International Hospital Association. Naturally my first feeling was one of great surprise. This was succeeded by an overwhelming sense of the honor conferred and of the responsibility entailed. Ardent though my interest has long been in the International Hospital Association, the glorious significance of this movement to ally hospitals all over the world seemed suddenly to burst upon me more strongly than ever before. An appalling responsibility devolves upon the man who undertakes to lead such a movement, and I can accept it only in the most humble spirit, fully aware of my unworthiness. I am accepting it because my personal humility is secondary to my enthusiasm for promoting the cause of better care of the patient through international cooperation of hospitals.

What a paradox it is that while wars rage, a humanitarian movement such as the International Hospital Association represents can unite sixty-four different countries, some of them actually engaged in conflict with one another! The world is beginning to see singly on one subject at least —the care of the sick and injured. The great privilege is accorded those of us in the hospital field of promoting this worldwide unity by actively supporting the work and embracing the ideals of the Association. Color, nationality, language, religious belief, social customs, the food we eat and the clothes we wear, may differentiate us, but when it comes to sick and suffering humanity, we have one common purpose of service, no matter what flag flies over us.

In the International Hospital Association we can all go to school again to learn from each other how better to care for the patient. We can all contribute to the advancement of scientific medicine. We can all serve in the army fighting the battle against disease in all countries. In some improvised hospital for disaster victims in a country whose ways are strange to us, methods can be employed that are as up-to-date as those used in a hospital in metropolitan New York, simply because among the staff of that emergency unit are some who have learned good practice through the Association.

The stated purposes of the International Hospital Association are only five in number, but these are broad in scope and high in idealism.

First—To provide a means for free interchange of thought among the hospitals of the world, pertaining to hospital problems.

Second—To obtain a knowledge of hospital systems the world over, in order to better compare and evaluate individual systems.

Third—To permit more comprehensive study of hospital problems through the broadest contact and experience.

Fourth—To assist hospital executives when traveling in foreign countries for observation and study of hospital problems.

Fifth—To promote a worldwide comradeship and unity among the hospitals of the world.

To work toward these objectives, the Association has established definite avenues of action. One of the most effective of these is the organization of forty Study Committees. The members of these committees are the internationally recognized experts or leaders in the individual study involved. In effect, these committees are engaged in research. Their reports to be given at the Toronto meeting in 1939 are expected to be the most important contribution ever made toward evaluating and unifying worldwide hospital methods, and placing these on a more readily comparable basis.

Among the other means of promoting the objectives of this Association is the publication of *Nosokomeion,* the holding of a Biennial Congress, the arranging of study tours, the collection of literature, reports, and other data through authentic sources, and the making of this collection available to the membership of the Association.

For the Sixth Biennial Congress of the International Hospital Association in Toronto in September, 1939, elaborate plans are now under way. This Congress will be held just previous to the meeting of the American Hospital Association and other organizations. The program will be of a strictly international nature, including the reports of the study committees. The problem of different languages will be overcome through publishing the addresses and reports beforehand in five languages—English, French, German, Italian, and Spanish. A special feature of the opening meeting will be a Pageant of Nations, now being prepared by the Toronto Committee on Local Arrangements for the meeting in 1939.

My acceptance of the office of President of the International Hospital Association was based

New President of the International Hospital Association

Malcolm T. MacEachern, M.D.
Associate Director, American College of Surgeons
Past President, American Hospital Association

upon a strong desire to enlist the interest and cooperation of the hospitals of the United States and Canada. They have much to give to the program of worldwide humanitarianism, and they have much to learn from the other countries. The inspirational value of this great united effort is beyond computation as a spur to the entire hospital cause. This is a golden opportunity to join in a program the benefits of which will be far-reaching.

To my distinguished predecessor, Dr. G. von Deschwanden, a man held in great esteem in the International Hospital Association, we are under deep obligations for his accomplishments and leadership. We sincerely hope he will speedily recover from the illness which unfortunately forced him to relinquish temporarily many of his activities.

Malcolm T. MacEachern, M.D.

Food Waste—Its Detection and Control

GEORGE A. KNIGHT, Waltham, Massachusetts

THREE things governing the detection and control of food waste are:

1 Purchasing
2 Preparation
3 Service

My experience in handling foods has shown that waste cannot be detected or controlled by weighing what is found in the waste barrel. In my opinion that is just one more daily task and proves little. I believe that by watching what comes in and how it is prepared and served, you can detect and control 90 per cent of your food waste.

Take for example the food waste between buying whole fish and fillet. With the exception of sword-fish, salmon, and halibut, all our fish are filleted. Ground fish yield from 33 to 45 per cent of the napeless fillets. It is better to buy these than the whole fish. I will go on record as quoting that of all the institutions and hospitals in New England, not one has a butcher or chef who can fillet fish within 10 per cent of efficiency of the expert fish cutters. Buying fillets also eliminates disposal of waste matter and cuts transportation charges and shipping costs from one-half to two-thirds. If bones and heads are needed for chowders, these will be supplied gratis by the dealer.

Most patients like lamb chops. These, as you know, are one of the most expensive and wasteful of foods. The most economical way that I have discovered up to now is in purchasing lamb racks "Frenched." There are many ways to "French" racks. My way—not that mine is best but it serves my purposes better—is to remove all suet and kidneys, and cut off flank straight across the rack, allowing only 3½ inches from the middle of the eye to the end of the flank. Many purveyors when cutting flanks, start in right, but when about in the middle of the rack, will measure nearly 5½ inches instead of 3½ inches thus increasing the weight of that rack approximately a half pound, which is of no value, adding only to food waste. It takes approximately 40 racks of lamb to serve our institution for one meal. If these shrink approximately a half pound each, there is a wastage of 20 pounds. Buy the exact amount of meat of a certain cut needed for each meal rather than buy whole lambs, whole beefs, etc. Unless you have an expert man in charge, many pieces of a steer would be used for purposes for which they are not best suited. In case you need ribs for roasting, it will be impossible to use the balance of that steer to advantage: in other words, to get 50 pounds of rib roast, you would be buying 700 pounds of beef, 650 pounds of which would have to be used for other purposes and although most of this could be used to advantage, there would always be certain pieces for which you would have no use. I suggest using all choice beef as the yield of edible meat is 5 to 10 per cent higher than other grades, and it is better flavored and more tender.

Presented before the New England Hospital Association convention, Boston, March 11, 1938.

The Author

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Saving Through Careful Purchasing

A few of the food items which show a saving of waste through careful purchasing are:

a Roasts: Four ribs of beef instead of five ribs.

b Steaks: Suet outloins instead of suet inloins. The flanks of both ribs and loins can be used for meat pies, stews and Hamberg.

c Chicken and Fowl: A 5-pound chicken or fowl will give a better yield than either a 4½ or a 6-pound due to weight of bones and fat. Speaking of chicken, many people seem to think a chicken is composed wholly of white meat.

d Short corn brisket five rib instead of seven rib. The last two ribs are very thin and mostly fat meat.

e Western pork instead of Eastern.

f Regular undercuts instead of diamond undercuts.

g Cooked canned hams instead of the so-called boneless and wasteless hams.

The Steward and Food Waste

Every steward or purchasing agent has his own personal problems. Some institutions and hospitals have greater food waste than others due to no fault of theirs. Much food waste can be blamed on the steward for not telling the purveyor what

he wants and how he wants it, and if he does not get what he orders, return the goods and refuse payment. Once is usually sufficient to convince these people that you mean what you say.

The advantage of going to market to pick out your supplies is questionable. In my opinion better results can be obtained by inspecting what they send instead of trying to remember if this is what you ordered. Nine times out of ten, it isn't. In the six and a half years I have been at the Middlesex County Sanatorium, I have yet to make my first trip to market to buy food supplies.

It is a curious thing, but many dealers seem to think any old thing will do for an institution or hospital, while hotels and clubs must have the cream.

Preparation of Foods to Prevent Wastes

Let us turn to the preparation of foods: The preparation of foods for baking, broiling, or stewing is of the utmost importance, and along these lines is where any good butcher can eliminate a large per cent of waste. Up to now, supplies have come along in pretty fair condition with very little waste. Now they go to the cook. For example: There are 40 roasts of beef in the ovens. Other things have to be brought along at the same time, such as soups and vegetables. Through carelessness or absentmindness 10 of these roasts may get scorched and about 5 pounds have to be wasted. Maybe it is an "off" day and most of the roasts are too well done. When this kind of food is served, your patients eat only about half of it, the rest swelling the wastage. When this is weighed the next morning, what does it tell you? Only that there is more than the day before. I claim that if the steward and his personnel are on the job, he will not have to weigh the waste to tell what happened. He has detected something right on the spot. Then is the time to take action in regard to its control. Another thing to be watched is the carving of meats. If you have figured on each roast of beef serving 30 people or on a 5-pound chicken serving 6 people and you get only 27 servings of beef and 5 of chicken, you have detected yet another channel of waste. Either the food was overcooked, causing a larger shrinkage or the cook or chef did not know how to carve it properly. If the steward visits his kitchen at all during the day, he can often discover food wastage and take action at once as to its discontinuance.

Some institutions and hospitals have a larger food budget than others, but if the food has been wisely purchased and properly prepared to meet the requirements of each, there will be a much smaller percentage of food waste.

Serving Foods

The serving of food is where the real problem comes. Let me try to illustrate how a counterman handles a cafeteria service for employees. He has meat, gravy, potatoes, and other vegetables all properly arranged in the steam table. The first person to come along is, say, a ward maid, a small eater. The counterman who has been serving these same people three times a day for months and should by now have a vague idea of their food capacity, makes no difference between the serving he gives her and that of a farm hand who is hale and hearty and has been working out of doors all day, and so on right down the line. The maid eats about one half the large portion given her. The rest is wasted, while the farm hand who was given a small order is coming back for a second helping and saying something like this: "What's the matter? Is the place putting us on short rations?" Then the counterman gets sore and piles enough on the second helping to serve two people. Result: More waste.

Waiter Service

Turn now to people having waiter service. Like the counterman he has had the same people for a long time and should know about what they will eat. Instead of going to the service counter and telling the counterman what he wants, he will say: "Two soups, three dinners." It makes no difference, man, woman or child, big or little eater, they all get the same amount. If it happens to be a day when they are "dipping light" someone may want a second helping. The waiter goes to the serving room and calls out "Refill" instead of saying, "So and so would like a small helping." Nine times out of ten that person gets more the second time than he did the first, resulting, as in the last case, in unnecessary waste. The serving of patients is different from other people, especially in a tuberculosis institution where no food can be returned to the kitchen except that left in the food trucks and where the appetite of sick people varies greatly from meal to meal. Naturally the food wastage is greater here. However, if the person serving the patients will use the judgment the counterman should have, the waste will be greatly eliminated.

I say in closing, as I said at the beginning, that purchasing, preparation, and serving, plus the eternal vigilance of the steward are the governing factors in the detection and control of food waste. I do not claim to be an authority on this subject, but as Uncle Bill says in the Uncle Ezra's broadcast, "Facks is facks and figgers is figgers" and my "facks and figgers" are based solely on the actual showing and result of my daily work.

A Critical Consideration of the Value of Postmortem Examinations

M. A. BLANKENHORN, M.D., Cincinnati

TO consider the value of the autopsy to medicine is a waste of breath or of printer's ink if the consideration is to be what the autopsy has done for medicine. It is common knowledge, even to those outside of medicine, that the entire structure of medical practice is built on facts learned from the dissection of the dead.

At times and in certain isolated medical problems, one might question the wisdom of studying the dead rather than the living. This question is expressed in the old contention as to whether the study of form outranks in importance the study of function; and also, specifically in medical science, as to the relative importance of pathology and physiology. Regardless of these contentions, medical history is clear in that the modern procedures of practice are founded on anatomy (normal and morbid) and on physiology.

Because dissection and the autopsy are primarily repulsive to sensitive natures and more so to society as a whole, physicians have from time to time pondered their value. They do this in a spirit of assuming the other fellow's place, with the purpose of dispensing with the autopsy if it is valueless or of encouraging the doing of autopsies if it is worthwhile.

The writer, although for more than twenty-five years a student of the autopsy and the clinic, can not say that the doing of autopsies has resulted in the saving of any particular life or even in curing a sick man. To look at the autopsy critically one must see it in less degree as it bears on single individuals or any particular medical practice, and in larger view as it concerns medicine in the abstract.

In the first instance, the autopsy is done to check the soundness of any particular medical procedure. In the second, the autopsy is performed to advance medical knowledge. When the autopsy is done at the request of the attending physician, in most instances it is expected to accomplish both these ends. Now one may suggest, for argument, that the autopsy no longer is able to advance knowledge because of its limitations and that modern methods of diagnosis no longer require the checking process of the autopsy. Whether the ends are desirable is beyond criticism at this particular moment; but whether the autopsy actually gains these ends is the object of this study.

The Author

● **Dr. M. A. Blankenhorn is the Gordon and Helen Hughes Taylor Professor of Medicine of the College of Medicine, University of Cincinnati.**

Does the autopsy advance medical knowledge? The ink-wasting part of this question has to do with the autopsy of the past. There can be no denial of the debt medicine owes to those whose bodies were dissected and to the dissector. But now in our present state of knowledge, is dissection outmoded because all mysteries are laid bare, and is there nothing more to learn? Certainly no understanding person claims that to be the case. Also we may ask, is the autopsy outmoded because it is supplanted by less gruesome methods to gain the same ends? To advance this claim, one must say that our instruments of precision applied with high skill can explain all the hidden manifestations of disease that lie beneath the surface. As one who has devoted much time in applying these methods for many years, I make no such claim, nor do I know of any sound-minded person who does. After all, there are few methods that are truly precise and there are very few infallible (pathognomonic) signs of disease.

In a recent address entitled *The Art and Science of Diagnosis* I critically surveyed the reliability of diagnostic tests. I was able to say that from the total of 342 laboratory tests, exclusive of x-ray, only 46 were regarded as specific by the pathologist in whose institute the tests were done. And still more important is the fact that these tests can seldom be specifically applied so that by tests alone all pertinent facts as to the nature and extent of the disease process are known.

This uncertainty which dogs the steps of the bedside doctor is overcome by faith and confidence that within the limitation of his art the practitioner does his best. But this best, at its best, is not scientifically exact. There is always the modest apology by which all bedside facts are qualified by referring to them as "clinical." That is, that these facts are limited in their value because other information is wanted which only the autopsy can supply.

It is true that many new discoveries are "clinical" and that fewer fundamental facts are dis-

closed by present day autopsies than formerly; but that may be partly the fault of the autopsy, but largely the result of diminishing returns. This compelling fact is present and precedes all clinical advance, namely, that not until the entire body is inspected is the truth known. And it is so now, even with the most modern of advances, impossible to examine the entire living body.

Nowadays most of the new medical knowledge comes from animal experimentation because the entire body can be inspected at will. In all important fields where medicine advances, the first step is made by producing the disease in animals. If that can be done, progress soon follows in the disease as it exists in man. This resort to the use of animals is by no means because, as is supposed by some, animals are dumb and therefore submissive, but is due to the fact that animal life is customarily sacrificed and therefore the autopsy is available at will. It is no doubt true that the autopsy as done on man now gives less to the advancement of medicine than it did formerly, but that is not because there is no progress to be made. In the so-called degenerative diseases (as Bright's disease of the kidneys; diabetes; coronary, renal and cerebral sclerosis) as well as other less common phases of poorly understood conditions that resemble aging processes, more autopsies in the early stages must be done before one can say that the autopsy can not advance the frontiers of medical knowledge. Formerly, that is before the days of functional testing of the living, the early stages of these diseases could not be recognized. The disease of "degeneration," both clinically and pathologically, was seen only in severe form. The clinician found only the end stages; and since the patients did not die in early stages, the pathologist failed to see their beginning. Now with functional testing to make a clinical diagnosis and the zeal to "autopsy" all deaths, especially those so-called accidental and unrelated deaths, the early stages may thus be seen in serial form in a manner now unknown.

How many autopsies are carefully done where accidental death has occurred in individuals with slightly reduced sugar tolerance, slightly reduced urea clearance or exercise tolerance tests after angina? Much importance is attached to chronic infections; but what is known of the results of one attack of tonsillitis or mild scarlet fever? In so-called accidental deaths it is customary to examine by autopsy mainly to explain the immediate question of what caused death; but when accurate case histories are recorded—as life histories before the accident of death—an opportunity comes to the pathologist to study the results of living, as well as to answer the question as to what event terminated the life in question.

In addition to the diseases just mentioned, we should include as unsolved problems (not only in their early stages but all through their course) chronic arthritis, emphysema, asthma, chronic poisoning (such as are thought to cause hepatic cirrhosis), chronic infections (as perhaps undulant fever, which is thought to produce widespread disease in certain parts of the United States), chronic poisoning from industrial and domestic contacts with lead, cancer, the leukemias, chronic skin diseases, and mental diseases,—to select from a host of unsolved medical problems. In mental diseases alone, will any pathologist claim all the mysteries are uncovered and no further good can come from autopsy? More hospital beds are provided for the insane than for persons with any other disease, and the numbers are increasing.

Pathologists admit that the routine autopsy of the insane is fruitless, partly because the brain is altered by incidental disease secondary to the demented state, partly because decay of brain tissue occurs before the autopsy can be done, but mostly because of methods. With special methods now developing as a specialty within pathology, namely, neuropathology, the entire subject of mental disease will require new study. Furthermore, the insane frequently die suddenly by methods that leave the brain untouched by disease or decay. Can anyone say this material has been adequately studied by general pathology or by neuropathology?

Now as to the value of the autopsy to "check" the clinic: From time to time in various places the clinician and the pathologist compare notes to see just how accurate or inaccurate a bedside diagnosis has been. These figures are generally published by the pathologist. No such stock-taking has been done recently because a great deal of contention seems to follow the publishing of such audits.

One audit much quoted twenty-five years ago, found the diagnostic accuracy of common ailments ranging from 95 per cent in diabetes to 16 per cent for acute nephritis. This audit (3,000 cases studied by Dr. Richard Cabot) might if repeated today show a vast improvement in diagnostic accuracy,—if it were not for the fact that our standards of accuracy are becoming higher and important diagnostic distinctions which Doctor Cabot would not attempt are now required, as for example the proper evaluation of the sclerotic phases of kidney disease and heart disease or the functional state of various endocrine glands: pancreas, hypophysis, thyroid, et cetera. This revision upwards of standards requires a steady revision of the International List of the Causes of Death which, although set up as the supreme law

for vital statistics, is nevertheless perpetually inadequate to describe the new information yielded by the autopsy.

It is by no means fair in this criticism of the value of the autopsy to assume that the autopsy as now done is perfect, for such is by no means true. On rare occasions the autopsy when thoroughly done finds no cause for death whatsoever; in fact, it discloses a state of bodily perfection consistent with life and vigorous health. This may be the case in status thymolymphaticus or in status epilepticus. Or the autopsy may disclose a disease, or a condition not fairly called a disease, for which no reasonable explanation is at hand (as, for example, idiopathic enlargement of the heart, or congenital cystic disease of the kidneys). The whole category of congenital malformations is unexplored as to cause,—and they are important diseases, even in adults.

The resort to hereditary causes where no genetic history can be found is not now a very safe resort in evading the charge of ignorance. In former times heredity was the explanation for such commonplace diseases as tuberculosis, leprosy, and pellagra. I would not, in this connection or in any other, minimize the value of knowing what little is known about hereditary diseases. It is true that in finding a disease which is transmitted to offspring, the discovery merely places the real problem beyond our grasp. But by that same token, restricting the offspring eliminates the disease. In the management of hereditary disease, great accuracy of diagnosis is indispensable. Such accuracy comes only with autopsy, for in tracing genealogical factors a single wrong diagnosis could lead to entirely erroneous conclusions in a larger group.

In most of the audits that have been made of the accuracy of clinical diagnosis, usually the best or better examples of medical practice are chosen, as in Karsner's six hundred cases and in those of Wilson. Both these examples were in circumstances where the effect of a high percentage of autopsied deaths is felt. Even in such conditions Wilson says that in the three principal causes of death, namely, cancer, tuberculosis, and heart disease, the percentage of correctness is about 75, 50, and 40 per cent, respectively.

In practice, generally considered, of all reported deaths that comprise our vital statistics, there is about one in one hundred checked by autopsy. In medical teaching centers some hospitals manage to do as high as 80 per cent autopsy and even higher on all deaths. Seventy-five per cent is regarded as a very good percentage; and hospitals approved for internship must do a certain total number to guarantee the atmosphere necessary to an excellence of practice that will be profitable to a beginner. Sir Henry Christian in 1926 advised that the "best single index of selection" of a hospital for internship is the autopsy percentage, 25 per cent of one hundred deaths being desirable.

All things considered, it would be utterly futile to discuss further the idea that medical research, medical practice, or medical teaching has reached a stage that can even be maintained, much less progress, without the continued practice of postmortem examinations.

Arden E. Hardgrove Accepts the Position of Administator of the Norton Memorial Infirmary

Arden E. Hardgrove, who for the past two and one-half years has been assistant secretary of the American Hospital Association, resigned to accept the superintendency of the Norton Memorial Infirmary, Louisville, Kentucky, effective March 15. Mr. Hardgrove is one of the better known hospital executives in the United States. Previous to his becoming a member of the headquarters' staff of the American Hospital Association he was superintendent of the City Hospital, Akron, for thirteen years.

Mr. Hardgrove's services during his tenure of office with the Association were noteworthy. He was secretary of the Joint Advisory Committee of the three national hospital associations, and kept in close contact with legislation introduced in Congress, as well as the measures which were introduced in the various state and provincial legislatures. He was the chairman of the secretaries' group of the state and regional hospital associations, and for the past two years organized and directed the February meetings of the legislative committees and the secretaries' and presidents' groups.

The Norton Memorial Infirmary is fortunate in securing Mr. Hardgrove; he will bring to their institution a wide knowledge of hospital administration, and the experience and qualifications with which fifteen years in hospital administrative work have endowed him.

Hospital Personnel Problems from the Standpoint of the Private Hospital

GEORGE G. REINLE, M.D., Oakland, California

THE personnel problems of a private hospital are many and continuous unless careful selection is made of every individual coming into the organization beginning with the hospital administrator, who must have the ability to coordinate all the various departments so that they function smoothly as a whole, to formulate proper policies, and who must be ever alert that each department shall do its part to its fullest capacity.

The same perfection of management that features a successful industrial establishment should obtain in a private hospital, if it is to survive; and this is the direct obligation and responsibility of the administrator.

His is the task of making quick, accurate decisions. His background of experience must be such, that seldom is he confronted with a problem for which he cannot find an immediate solution.

He must be at once a business man, a diplomat, a leader of men, and capable of meeting and dealing with persons in every walk of life, making and holding friends for the institution.

My intention is not to draw a picture of a machinelike individual as the ideal hospital administrator. He must above all be aware that he is the head of a great humanitarian institution, than which no greater exists in all creation. But he must likewise be aware that even the greatest hospital cannot long exist, cannot continue to serve the public to its fullest possible efficiency, under careless, slipshod management.

The famous Topsy may have (as she said) "just growed," but no successful hospital has ever been so fortunate as to have just growed. Its success radiates from the administrator's office, the nerve center, from which springs the invigorating impulses which make of the institution a thing of life, smoothly coordinated, rich in that vital if intangible something we call *esprit de corps*.

Hospital Administrator and His Business Staff

Closely allied with the administrator's office is the business force. Here again is a vital factor in the successful private hospital where the staff must be selected on the basis of ability, to master the intricate details of hospital accounting and admissions of prompt and accurate postings and reports. Where the posting is done at night, the administrator has before him every morning a summary of transactions of the day before. He is able, then, with these facts and figures before him, to make his decisions for the day—any one of which may be of vital importance.

Under an arrangement whereby the business force is responsible for the reception of patients and collection of accounts, the necessity of careful selection of business force personnel is quickly apparent. Here the business department deals with the sick, the frightened, the doubtful. Registration of patients is a delicate task calling for integrity, kindliness, courtesy, a pleasant personality, freedom from prejudice, and the understanding of human nature.

First impressions are lasting, creating confidence and making a patient comfortable is something more than a matter of supplying good beds and a luxurious lounge; it should begin the instant he enters the door, and the registration nurse who fails to recognize this fact, who is so busy that she neglects the subtle elements of human understanding is remiss in her duties.

If it is noted that a patient is too ill to be troubled with the routine admission questions, he should not be kept waiting at the registration desk, but sent directly to his room. Relatives may then be requested to report back for the necessary information and arrange for payment of the hospital account. Every guest entering a hospital has a certain amount of trepidation and the staff should try in every way to adjust that feeling to one of confidence and security. An even cheerful, observing attitude serves to quiet the most excitable patient. Thus received, the patient, in-

The Author

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stalled in a warm, pleasant room, becomes more amenable to treatment as the hospital routine begins.

Responsibilities of the Directors of Nursing

Heavy are the responsibilities that fall upon the shoulders of the director of nursing—a position calling for a great diversity of high qualities, and therefore requiring the most meticulous care in filling. In general, her tasks may be divided into two classifications; administration and education. Under administration hers is the task of selection and supervision of personnel; visiting every patient daily to see to their mental and physical comfort; inspection of the service rendered; calling of special nurses; employment and dismissal of nursing employes; interviews with those seeking advice as well as with those seeking employment; correspondence, to be attended to promptly and with courtesy; sending recommendations when requested; attending regular faculty conferences.

Under the classification of education, the ability and experience of the director of nursing is tested in the selection of students where so many factors must be considered; health, age, education, culture, personality, adaptability, and character. She assigns students to various departments, arranging rotation of practical service to meet the requirements of the bureau of registration. She oversees the class schedule, instructs classes, provides for the care of sick nurses, maintains a day book and compiles a monthly summary; reports every month to the bureau of registration and also to the board of trustees; is responsible for the conduct and discipline of students; holds personal interviews with every student every month; meets with the student's council every month and attends study body mass meetings every month.

It is therefore easy to perceive why the director of nursing must be an individual of high qualities and fine integrity with a thorough knowledge of hospital routine and, last but not least, a keen understanding of people, that she may gain and retain the confidence of her students.

An important link in the personnel chain is the assistant director. She is the general supervisor of surgery, directs supervision of the supply room, serves as intermediary between nursing service and other departments, particularly maintenance, housekeeping and the linen room. One of her tasks is to teach students the preparation of nursing supplies and to develop their knowledge of the various articles of equipment. These duties are carried out by the supply room personnel which consists of the supervisor, two graduate nurse assistants, two student nurses, and one clerk. The list of trays for diagnosis and treatment carried in the supply room number about thirty, which in itself emphasizes the responsibilities of the assistant director.

Graduate and Student Nurses

I have compared the personnel of the private hospital to a chain and I wish to emphasize that *comparison* even going so far as to remind you of that which you all know: a chain can be no stronger than its weakest link. But I vision the hospital personnel chain as a finely meshed one, delicate perhaps in appearance but invincible in fact, capable of withstanding terrific strain but elastic withal, because it is a human chain. Forming many of the links in our hospital chain are the graduate nurses and student nurses.

The graduate nurses in the surgery must have had post-graduate instruction and as it were, specialists in their type of work too. In a surgery setup consisting of six operating rooms, three majors, two minors and one cystoscopy, opened at 6:30 a. m., and closed at 9:00 p. m., we find this arrangement; two graduates and two student nurses cover night emergency calls and weekends. There is a graduate nurse in charge of each surgery and one student is assigned to her for instruction. It is not necessary to outline the various duties of the nurses, which are many-fold, but they are duties which must be carried out with meticulous care. And if this is to be true, each nurse must have become imbued with the loyalty, the *esprit de corps*, if you will, which, if the institution is to be successful, must have permeated down to her from the nerve center of the hospital, the office of the administrator.

We have seen that the student nurse must have successfully passed rigid examination upon her registration, and she has been found to have those higher qualities which distinguish a good nurse from an individual having no qualifications for nursing. But there are hidden qualities in all of us which respond to certain stimuli. The good nurse will exhibit intense loyalty, courage, persistence, and endurance—qualities not readily detected in an examination. And may I say, parenthetically, that in my experience I have found those qualities present among nurses to a surprisingly high degree.

Medical Record Department

No discussion of modern day hospital personnel problems could be complete without a glance at the medical record department. Only in recent years has this department been developed to its present degree of efficiency. Here is assembled all the medical data of every patient who enters

the hospital, segregated and made available for future reference. Each day a check is made with the registration desk to make certain that a case record is received for every patient dismissed. These are then listed in a daily analysis book according to case number, sex, under what service the patient has been treated, condition on discharge; deaths, necropsies, consultations, infections, etc. At the end of the month the aggregate totals make up the monthly analysis of hospital service. Charts are then reviewed for completeness or incompleteness. If incomplete, a notation is made of what is lacking, and the chart placed in the attending physician's file, to be called to his attention later. If the record is complete a summary card is made and the record filed numerically. From the information on this card a cross index and file are maintained of the diagnosis and operation. The card is then filed alphabetically and becomes the patient's index file. As it also bears the numerical case number given the patient on admission, it serves as a cross file to the patient's record.

Complicated as this procedure may seem at first glance, it actually is a practical system worked out with great care by a competent record librarian—another important link in the personnel chain. Its value to the hospital is incalculable.

The problem of every small hospital, and perhaps the large ones as well, is not that of the completed record but the incomplete record. The hospital librarian, on the theory that the doctor should be given some assistance in this work, are specially trained in taking medical dictation. One member of the record department is in attendance in surgery during operating hours. It has been said that this is not practical as it wastes too much time in waiting for the doctor to finish operating. This may be overcome if a desk and noiseless typewriter are made available and a chair placed where the surgeon may rest while dictating his findings.

The question has been raised, why not use a dictaphone in surgery? The answer is that the surgeon is tempted to pass it by, knowing full well there will be no gentle reminder from the mechanical contrivance to dictate the record. The record librarian must, however, be more than a medical stenographer; she may be likened to a private secretary, as she must be ever on the alert to call the doctor's attention to anything that she perceives to be lacking in the record.

This leads us to the personnel of the department. The record librarian in charge should have special training if she is to conduct the department economically and at the same time give the service required of it. Too much emphasis cannot be placed upon personality. A spirit of helpfulness, not one of criticism or antagonism, must be displayed if the cooperation of the medical profession is to be secured.

All this cannot be accomplished unless the department is sufficiently staffed. There should be at least one trained record librarian in charge of the department who is capable of training her assistants. In a hospital of 150 to 200 beds where there are no interns to assist the doctor in writing his case histories, two fully trained workers and at least one other clerk are required.

The record department has become an indispensable part of every hospital. On it depends much of the reputation of the hospital in a scientific way. Unlike some of the other departments, it cannot always be measured in dollars and cents except when the hospital becomes a defendant in a legal suit, and then much depends upon the written record.

While this discussion does not concern the medical side, I should like to emphasize the importance of the fullest cooperation between the department of pathology and the medical staff. Here we have the possibility of a strong link or a weak link in the personnel chain and the degree of strength or weakness may lie in temperament alone—just as it may in any other department.

Director of the Physical Plant

Less known, perhaps, but an indispensable link in any hospital personnel is the director of the physical plant. Hospitals do not maintain themselves. A thousand and one things must be attended to, and to successfully fill his job the plant director must be an individual of many accomplishments. He must understand construction, painting, mechanics, electrical equipment, and understand them so well and perform his many duties so well that the plant operates as a well-oiled machine, the mechanics of operation apparent to none but himself, his staff and the administrator to whom he is directly responsible.

We have outlined, if incompletely, the personnel requirements of a private hospital having about 200 employees, and endeavored to emphasize the importance of careful selection and training. We began with the hospital administrator as the supreme in command, but he is not quite that for above him sits the board of trustees. Nor is the board supreme. Still higher sits the public which, in the last analysis, will decide whether we are to prosper, only partly to fulfill our mission, or to fail. That judgment will be final.

No institution, whether hospital, factory or de-

partment store, can be perfect in setup and operations for there is always the unpredictable human equation to consider. Yet the constant striving for perfection can achieve standards so high that the constant bugaboo of many hospitals, that of balancing accounts receivable with accounts payable, need not be feared.

If this is to be achieved—and it is being achieved—the importance of personnel cannot be stressed too highly. I hesitate to once more use the ancient simile of the link-in-the-chain, but I can think of none more applicable. A hospital is an organization comparable in many respects to the purely commercial concern, but with a definite difference; the highest efficiency at all times, good judgment when a life may hang in the balance, human understanding and kindly tolerance, and need for constant awareness of the great work in which we are engaged—all is indispensable to a hospital if it is to succeed.

One danger we may face, though not detect it, and that is self-satisfaction. It is *not* enough that we do the *best* we can; we must reach ever upward, for only in this spirit can the men and women who form the link in our chain continue to contribute richly to the advancement of mankind.

Forty-Two Years a Hospital Trustee

Frederick W. Standart, dean of the hospital administrators of the Rocky Mountain Region, and one of the oldest hospital trustees in the United States from the point of service, has served Saint Luke's Hospital as a member of the Board of Managers for forty-two years. In fact, his hospital service dates further back than that, when, as a boy in high school, he assisted his aunt, who was then head of the Ladies Auxiliary, by running errands and collecting donations for the hospital. Unfortunately, he has not been given official recognition for this service.

Mr. Standart has served as secretary, treasurer, and for the past ten years as chairman of the Board of Managers. During his tenure as trustee, the hospital service has completely changed. Standardization has taken place, and greater demands have been made for specialized equipment and services. Mr. Standart's latest contribution to Saint Luke's Hospital was the raising of funds during the last year which enabled the hospital to erect a new home for nurses.

The following is a quotation from a resolution passed by the Board of Managers of the hospital upon Mr. Standart's completion of forty years' membership on the board:

". . . During these many years Mr. Standart has made his consistent contribution in various capacities, and whether as a member of the Board of Managers or as its chairman, or as the head of important committees, he has always given to the institution his best powers both in mind and body. The present high standing of Saint Luke's Hospital and its continued efficiency . . . are due in no small measure to his constant, untiring and unselfish labors. His service on the Board of Saint Luke's Hospital has been a definite contribution to society and to the community as a whole.

Frederick W. Standart

"For his forty years of service and sacrifice we hereby record our sincere gratitude, confident that we bespeak not only our own appreciation but also that of the entire diocese of Colorado, and the community which is served by Saint Luke's Hospital. We congratulate him, and claim for ourselves the happiness of his continued leadership as chairman of our Board of Managers."

It is of interest to know that among many of the other activities in which Mr. Standart has participated, during the World War he was assistant manager of the Mountain Division of the American Red Cross, and he gave up his business entirely to devote all his time and energies to this patriotic service.

Basis of Compensating Member Hospitals in Hospital Care Insurance Plans

PERRY ADDLEMAN, Chicago

SHARP increases in the number of persons entering voluntary hospitals throughout the country as beneficiaries of hospital care insurance plans, together with the rapid growth and wide spread of the movement, raise an increasing number of questions concerning the gains or losses of member hospitals in their care and treatment of subscribers enrolled in the various plans. This in turn brings to the fore the whole question of whether or not member hospitals are being fairly remunerated, and by what means they may be fairly remunerated.

Of the various methods which may be used to pay member hospitals for the care they provide to hospital care insurance patients, two methods are most commonly cited in discussions and used in practice. The first method is based on the idea that hospitals should be paid for their services on an average cost, or on an average cost-plus basis. The second idea is that they should be paid for services on the basis of average billings —average charges to the public generally—sometimes referred to as the basis of prevailing rates. It will be noted that payments in both methods are based on per day averages, in the one instance average costs and in the other instance average billings, so that henceforth in discussion of either of these methods it will be assumed that payments are made on the basis of per day averages.

There are several other methods by which member hospitals might be paid for services, but let us first examine these two methods to see what they mean in terms of present practice and in terms of future policies and equities.

Payment on Cost Basis

The cost or cost-plus method of pricing a service or product has always seemed scientific. It assumes for the buyer an opportunity to analyze costs on a unit basis or on a comparative basis or both. Such analysis makes the loading of prices almost impossible or if prices are loaded the load is apparent and the fairness of the load may be judged critically. Cost analysis and amply advertised costs generally eliminate arbitrary, unfair, and monopolistic price rigging. Moreover, there is little doubt that charges based on advertised costs inspire both confidence and appreciation in consumers of a service or a product.

The Author

● **Perry Addleman is executive director of Plan for Hospital Care, Chicago.**

Incidentally at this place, the position of our board in Plan for Hospital Care should be made clear. We are thus far opposed to any idea of making hospital care insurance a class proposition. If such insurance is to avoid becoming a class proposition there must be no connotations or implications of charity or philanthropy in it. In order to wash out completely any implications of charity, we and our subscribing members must be willing to pay member hospitals a scale of rates that will give hospitals an operating margin equal to, or nearly equal to, the operating margin they acquire in furnishing private and semi-private care to the public generally. Therefore, we believe that although rate structures may be built up from unit cost calculations, actual payments should cover cost plus a clear margin of gain.

However, payments for services rendered by member hospitals to subscribers on a cost or a cost plus basis would seem to incur no great difficulty in hospital care insurance. There are no major approved plans which could not protect themselves through reserves against any fluctuation in costs short of violent inflation. And of course practically all our subscriber agreements provide for year-to-year increase in premiums if such increases are necessary.

Hospital Costs Not Generally Known

In fact, there is only one objection to paying member hospitals on an average cost or cost-plus basis, and that is that most of our member hospitals in most plans do not know what their unit costs are. And it is probably fair to say that it will be some time before any large number of voluntary hospitals in America will have installed cost accounting methods that will withstand more than superficial inspection.

True it is that many hospitals in New York and Cleveland have installed good cost account-

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ing mainly because of cooperative efforts made through the United Hospital Fund and the Cleveland Hospital Council. Other hospitals over the country employ sound costing methods, and in Chicago we have half a dozen hospitals that are costing their units of service rather carefully. But these hospitals are the exception to the rule, and it would be utter folly for us in Plan for Hospital Care to attempt to remunerate our sixty-five member hospitals on a cost or a cost-plus basis. And I suspect that were most plans to attempt to do that they would find themselves in the same welter in which we would find ourselves.

Nevertheless, it is likely that we could all agree on the ultimate soundness and equity of remunerating hospitals in hospital care insurance plans on a cost or a cost-plus basis. And it seems to me that payment for service on this basis should be encouraged wherever it is practical. Thus as hospital care insurance gains the momentum it undoubtedly will within the next two or three years, we put added weight behind the ever-increasing pressure toward good hospital management and accounting.

Payment on Basis of Average Billings

Now, pending the installation of sound cost accounting methods in American voluntary hospitals, it seems that the most practical method of paying hospitals for the care they provide for hospital care insurance patients is a payment method based on average billing for units of service or average charges to the public generally.

We, in Chicago, assume that if a member hospital can demonstrate an average earning of $4.50 a day for bed, board, and general nursing care in semi-private accommodations, we should as a temporary measure pay an average of that amount for such services. As a matter of fact, we are anxious to pay that amount regardless of cost because until hospital administrators become thoroughly acquainted with all the variable factors, social and economic, involved in hospital care insurance, we want to avoid any possible discrimination against our patients. Really we want to pay slightly more than average earnings after all losses are deducted, because if there is to be any discrimination, we think it should be in favor of our patients. In other words we want our subscribers to yield the same average income to hospitals which non-plan patients or full-paying patients from the general public would yield.

Let us exemplify this procedure. Early in our studies preliminary to setting up Plan for Hospital Care, it was suggested that we pay member hospitals $15.00 for a one-day stay, $18.00 for a two-day stay, $21.00 for a three-day stay, and $6.00 per day for stays of four days or longer up to twenty-one days. It was assumed that we would pay one-half of these amounts for straight one-half coverage for dependents. And a random study of periodic stays of patients comprising more than 50,000 patient-days of hospital care indicated that if we were to pay these amounts, our average payment to member hospitals would be about $6.30 to $6.32 per subscriber-day of hospital care.

We then started a study to determine what the average earnings of our member hospitals were on patients in semi-private accommodations. Twelve representative hospitals provided us figures which seem fairly reliable. We finally calculated that their average earnings from patients in semi-private accommodations was about $5.88 for the year 1936. We added six per cent to that amount to cover increasing costs, and concluded that if our patients showed an average earning of $6.23 they would match the earnings from semi-private patients generally. To arrive at that average payments on the basis of periodic stays studied, we scaled our payments to member hospitals down to $14.00 for a one-day stay, $17.00 for a two-day stay, $20.00 for a three-day stay, and $6.00 per day for a four-day stay or longer. We predicted that such payments would yield member hospitals $6.23 to $6.25 per patient-day for semi-private accommodations. Actually during 1937 it yielded them $6.26 plus.

It is interesting to note in this connection, that in one-half payments for one-half coverage for dependents the plan during 1937 yielded member hospitals not $3.13 per day of care as one might assume, but $3.29 per day.

The only concession made to our subscribers who select private rooms is an allowance of $4.50 per day on the cost of the private room.

In addition, it should be observed that on our case reports member hospitals submit an itemized statement of what the charges against our patient ordinarily would have been had he not been a plan member.

Difference Between Billings and Cost

Let us see what this all amounts to in actual practice. Is it a fair method of remunerating member hospitals for the services they render? For the first year of operation (the calendar year of 1937) we kept a profit and loss statement for each case by hospitals—and we shall continue to do that for some time at least. Now, on the basis of figures submitted by our member hospitals on each case, those hospitals collected from the plan, and from our members in cases of private room differentials, for all classes of service rendered,

private and semi-private, 94.52 per cent of what the total billings for all patients in all classes of accommodations would have been ordinarily. Said another way, our member hospitals sustained a loss of 5.48 per cent of what their total billings to the same patients would have been ordinarily.

A recent study in New York shows similarly interesting facts about operation of the plan here. During 1937, hospitals in New York lost approximately 10.6 per cent of what their ordinary billings to plan patients would have been. But according to the survey of the United Hospital Fund, hospitals were, despite this presumed loss of 10.6 per cent, paid nearly 20 per cent more than the cost of the service they rendered.

In the Chicago plan the presumed loss of 5.48 per cent includes such losses as those of one member hospital which without extra charge provides private room accommodations to the graduate nurses who are enrolled on a test basis in the plan. Yet the bills are figured as though the hospital would ordinarily charge their own nurses extra for private room, when, as a matter of fact it never does. In other instances, hospitals in Chicago through lack of thorough understanding of benefits of the plan and of proper procedure in admitting patients have incurred loss by providing services not included in the plan. All such losses are included in the presumed 5.48 per cent loss.

But let us throw out accidental losses of any kind and think about this loss of 5.48 per cent of normal billings in broader terms. To begin with, most of our 65 member hospitals would lose 5.48 per cent of billings by reason of non-payment of bad debts alone. We also know that nowadays it is not the general experience for hospital administrations to show more than 2 or 3 per cent loss through non-payment of bills. Consequently, if losses of this character become any greater there is a strong tendency to charge them off to charity or to part-pay service. In New York and in Chicago this practice is continuously observed.

Hospital Service Plans Reduce Charity Load

And while on the subject of charity service, there is no doubt in my mind that at least 5 per cent of our patients in Chicago would honestly have been charity patients or part-pay cases had they not been members of Plan for Hospital Care. If your hospital administrator doubts such a statement ask him to make random surveys at 10-day intervals to determine how many of the patients in his charity wards are fairly regularly employed or are the dependents of fairly regularly employed heads of families, and who yet cannot pay the hospital bill.

There is another matter to be considered. Our member hospitals all show a wider margin between costs and earnings in private room accommodations than they do in semi-private accommodations. In fact, there is a strong feeling in the field that semi-private accommodations should be billed to the public at cost. In any event the operating margin in private room accommodations is considerably greater, and several studies have been made indicating quite clearly that 15 to 20 per cent of our patients who occupy private rooms would be forced to occupy semi-private rooms were they not beneficiaries of hospital care insurance. Thus, hospital care insurance also increases the income of the hospital per pay-patient and it might be added, correspondingly increases income of the physician.

Lastly, let administrators think of the publicity that hospital care insurance has given the hospitals. I do not believe that any competent person in the hospital field will challenge the statement that plans for hospital care in the communities in which they operate give good hospitals and proper hospital care more good publicity than all other sources of publicity put together.

All in all, it seems that under present conditions this method of remunerating member hospitals on a basis that gives them earnings closely approximating their earnings from pay patients generally is fair to hospitals.

Danger of Basing Payments on Prevailing Rates

Are there dangers in this method of remunerating member hospitals for the services they furnish to hospital care insurance patients on the basis of the prevailing rates to the public? Are there dangers for the plan? Are there dangers to the public? Undoubtedly there are. But in many instances we have at least two strings to our bow and I believe dangerous tendencies can be controlled.

A relatively minor danger is that of hospitals padding their statements with what ordinary charges would have been, had our member not been a plan beneficiary. This seems a harmless subterfuge to billing clerks, sometimes even to superintendents, since for the moment it causes the patient, the plan, or the hospital no outlay of cash. Obviously, in the long run it does cost something because it means the hospital's losses appear larger than they really are. However, comparative studies of costs and charges of other hospitals make the subterfuge rather too obvious, particularly if a hospital continues the practice. This danger is also curtailed to a large extent if hospitals are asked to submit scales of rates.

A greater danger is that of hospitals combin-

ing to boost rates and charges all along the line. However, when they do that they must sustain those increased rates in competition among themselves, and there is always the probability of collapse of such rate rigging. Further protection to hospital care insurance against such practice lies in the fact that if hospitals boost their charges to us they must also boost their charges to the public generally. Otherwise comparative studies would reveal the discrimination against our subscribers, and hospitals could not withstand the public indignation which would result from well publicized statements of the facts of such discrimination. If there is no discrimination against our subscribers in a rate boost, then the many resistances the general public offers to such rate boosting would operate in favor of hospital care insurance plans.

Many of the apparent dangers in paying hospitals approximately prevailing rates to the public are curtailed by free competition among hospitals, by effects of supply and demand on rates, by the filing of rate schedules, and, most importantly, by publicity.

One real danger to hospital care insurance in whatever way we remunerate hospitals is one which fortunately does not seem imminent. It is the danger of sharp inflation. We are essentially in the business of contracting and insuring a commodity. In the main, we do not guarantee dollars indemnities as other insurance companies do. We guarantee and provide hospital care—a commodity. A business which guarantees future delivery of commodities always suffers most during inflation. Especially is this true for us since we cannot protect ourselves even as well as most commodity businesses can. We cannot buy and store our commodity, and insurance laws so regulate our investments that in case of inflation it would be difficult for us to invest so as to keep the purchasing power of our dollar reserves up.

To the contrary, and encouraging to hospital care insurance, is the fact that we could go through a severe depression and deflation in better shape than most businesses could hope to do. In this respect and in many others this is one of the clearest examples of a counter-current business imaginable.

Just one more thing. In the study of our first year of operation it was found that had the service corporation's payments to participating hospitals been 9.2 per cent greater, hospitals' bills as they would have been rendered to the public would have been paid in full without any additional payments from our subscribers. Had we paid the hospitals this extra 9.2 per cent, our hospital care reserve would have been reduced less than 17 per cent.

I shall not attempt to draw any conclusions from the facts just stated, but our member hospitals must appreciate the need of cooperating with us; our need of building strong reserves; and the necessity of both member hospitals and the various plans pursuing courses in the interest of good hospital care for our subscribers and the interests of public welfare generally.

Leonard Shaw Appointed Assistant Secretary American Hospital Association

Leonard Shaw of Saskatoon, Saskatchewan, joined the administrative staff of the American Hospital Association on March 23, in the capacity of assistant secretary. Born and educated in England, Mr. Shaw went to Canada in 1924, entered the hospital field as secretary of the General Hospital at Swift Current, Saskatchewan, and remained there for a period of six years.

In 1930 he became business manager of the Moose Jaw General Hospital and after a year was promoted to the superintendency of that institution. He remained in Moose Jaw for three years and during that time was twice president of the Saskatchewan Hospital Association and a member of the Canadian Hospital Council.

Mr. Shaw received the appointment of general superintendent of Saskatoon City Hospital in 1933, and was required to conduct a complete reorganization of the administrative and professional departments of the hospital. During his tenure of office he served for two years as a member of the Canadian Hospital Council and chairman of the Committee on Finance. In addition to his other duties, Mr. Shaw has been the editor of *Canadian Hospital*, the official journal of the Canadian Hospital Council, since 1936.

Mr. Shaw resigned from the Saskatoon City Hospital in March of this year to accept his present appointment. For a number of years Mr. Shaw has been a member of the National Hospital Day Committee and for the past two years has been responsible for National Hospital Day activities in Canada.

State Program for Premature Infants

FLORENCE L. McKAY, M.D., Boston

A STATE premature program may be defined as an effort on a state-wide basis to improve standards of care for premature infants and thus to reduce the present high death rate. While a few other states have premature programs, Massachusetts is the only one that, as yet, has a program of this particular type. Massachusetts' program is comparable to the city program in Chicago.

May I say here that what I shall be talking to you about is at present merely a program. It is not yet completely organized and we have, of course, no results to show; it is an outline of what we have in mind and what we have started to bring to fruition.

Why Should a State Have an Interest in Premature Infants?

First of all, let us consider a few statistics. In the United States, every fourteen seconds a baby is born; every eight minutes a baby dies in the first month. These deaths of infants in the first month we term neo-natal mortality, and more than one-half of them are due to prematurity. In Massachusetts, every eight minutes a baby is born; every five hours a baby dies in the first month and every eight hours a premature baby dies. The chart will give further information concerning Massachusetts' interest in premature infants. You will note that the total infant mortality of the state has been reduced about 100 points in a thirty-five year period. During twenty-five years we have had figures on our neo-natal mortality. You will observe that the line of neo-natal mortality, instead of going down like that of the total infant mortality, is practically level; that is, in the last twenty-five years there has been little or no change in the infant mortality under one month. Therefore, the Massachusetts Department of Public Health hopes by reducing the mortality of premature infants to thus reduce its neo-natal mortality and its total infant mortality.

Secondly, during the past twelve years there has been a decrease of more than 30,000 live births in Massachusetts. This makes more important than ever the saving of the lives of infants who are born.

Reduction of Premature Deaths

What are the indications that premature deaths can be reduced? A study of neo-natal mortality by Stewart Clifford published in the *Journal of Pediatrics*, March, 1936, states that the neo-natal death rate at the Boston Lying-In Hospital has "in the past two years been 20* and 19 respectively" and there has been "a reduction in the premature infant death rate to 10." The state neo-natal rate for that period was about 30 and the premature death rate 16. If the state neo-natal rate could be reduced even 10 points, more than 600 infant lives could be saved per year. This would mean a saving of about one-half that number of premature infants. If one hospital can cut its neo-natal death rate to 20 and its premature death rate to 10, why can't all do the same?

The neo-natal death rate in the Massachusetts' hospitals having maternity service and licensed by the Massachusetts Department of Public Welfare is not available, but the premature death rate for 1937 was:

For all hospitals—15 per 1,000 live births

For all hospitals outside Boston—13 per 1,000 live births

For all hospitals which were centers on March 5—14 per 1,000 live births

About three-fourths of all births in Massachusetts occur in hospitals, so about three-fourths of our premature problem is there and about one-fourth is in the homes. The premature law which was passed last year should stimulate the hospital care of infants born in the home by encouraging the transportation of infants born in the home to hospitals equipped for their care.

Establishment of Hospital Centers for the Care of Premature Infants

It is thus evident why a large part of our premature program centers about the hospitals and consists in the establishment of hospital centers adequately equipped for the care of premature infants. This hospital center part of the program is state-wide outside of Boston. Thirty-five centers have been established to date and ten or fifteen more will be added. The hospitals are selected with a view to their strategic location and the grade of service given by the hospital. We were assisted in our choice of hospitals not only by a

The Author

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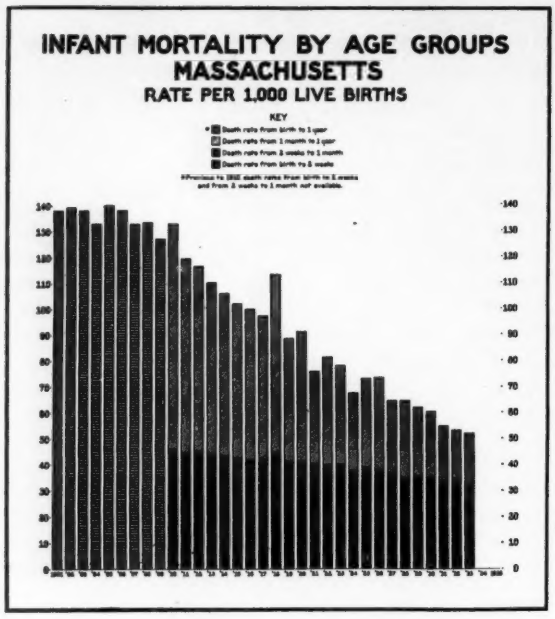
Presented at the New England Hospital Association Convention, Boston, March 12, 1938

*These and following rates are per 1,000 live births



road map but by the hospital licensing division of the State Department of Public Welfare, by representatives of the Massachusetts State Nurses' Association, the Massachusetts Organization for Public Health Nursing, the Massachusetts League of Nursing Education and the supervisor of nurse training schools in the State Department of Registration in Nursing.

After the selection of the hospital and its indication of interest in becoming a part of the program, the plan is outlined to a group at the hospital, consisting of the superintendent, the supervisor of the nurseries, a member of the hospital board and such members of the pediatric and obstetric staffs as are interested. The minimum standards for the care of premature infants are discussed. These are the same standards which were used in the Chicago demonstration. They include:

1 The prompt transfer to the nursery of any premature born inside or outside the hospital with the least possible exposure

2 A minimum handling of premature infants, few procedures requiring removal from bed

3 Some type of heated bed for the care of prematures. An air conditioned nursery gives the best results in the care of premature infants and we hope air conditioning may sometime be possible for all hospital centers. At present, we do not include it as a requirement. Two of the centers already established have air conditioning—the Quincy City Hospital, which has an air-conditioned premature nursery and obstetric nursery, and the Worcester City Hospital, which has an air-conditioned obstetric nursery.

4 Provision of continuous supervision by a graduate nurse with special training or experience in the care of prematures

5 Oxygen kept in the room and easily and quickly available

6 The exclusion of infection by all possible means, such as—

Use of gowns and masks for doctors and nurses

Hand washing facilities easily available

Individual equipment for the premature

Exclusion of all persons who have infections

7 Provision of breast milk

8 Arrangements made by the hospital for careful follow-up in the home, through a public health nurse or a hospital nurse, on the discharge from the hospital of premature infants

9 A separate room for the care of the premature, a heated bath table, a high and low thermometer, and a hygrometer in the nursery, furnished by the hospital when possible

After the hospital becomes a center, all the physicians in the locality which it serves are notified.

Prenatal and Obstetric Care

Part of the premature program is the stimulation of adequate prenatal and obstetric care. Studies made by Dr. Stewart Clifford* show that such maternal conditions as heart disease, placenta previa, caesarean and breech deliveries and administration of morphine during the four hours preceding delivery, result in a high mortality of premature infants. They also show that there is a striking decrease in premature infant mortality with each eight ounce increment in weight. As the fetus gains six to eight ounces in the eighth lunar month and eight to twelve ounces per week in the ninth lunar month, it is of great importance to its viability to postpone its birth as long as the condition of the mother will tolerate. Good prenatal care and good obstetric care are, therefore, needed in the prevention of premature births and deaths.

Each mother in the community should have available good prenatal and obstetric care.

Each community should be stimulated to give its best in prenatal and obstetric care, either through private physicians or clinics.

Educational Program

A program of education for professional and lay groups is a part of the premature program.

*Journal of Pediatrics, August 1934 and January 1935

Physicians have access to postgraduate lectures on the premature infant and on prenatal and obstetric care as a part of the postgraduate lectures in pediatrics and obstetrics given by the Massachusetts Medical Society. A copy of the premature law has been sent to each physician in the state. When the physicians are notified of the formation of a hospital center, they are also sent the leaflet on the care of premature infants by Dr. Julius Hess of Chicago and the leaflet for mothers on the care of the premature infant prepared by the Division of Child Hygiene.

For nurses, under the direction of Miss Ann Dinegan, our Supervisor in Public Health Nursing Education, we have been able to arrange for a refresher course for nursery supervisors at the Boston Lying-In Hospital. This course is offered to the nursery supervisors of the hospitals which have become premature centers. The course is two weeks in duration and a teaching supervisor, who will give her full time to this work, has been engaged. Not more than two nurses will be admitted at one time and the nurses will have actual work with premature infants, will make rounds with the attending physicians, will have a certain amount of formal instruction of the discussion type and will observe, and possibly participate in, special treatments. The Department of Public Health will pay for the tuition of the nurse and also for her traveling and living expenses during the two weeks of the course.

A consultant nurse from the Department of Public Health, who has had training in premature care, is now available for consultation service to nursery supervisors in the hospital centers. Through her and also through the office of the Division of Child Hygiene, we hope to establish a clearing house or a mutual exchange on matters which concern premature care with contributions from one hospital to another and to us, as well as contributions from us to the hospitals.

Some type of special instruction for public health and private duty nurses in the care of premature infants is planned for the future but the details are not yet completed. It is hoped that the nursery supervisors who complete the refresher course will make a special contribution to the nurses in training in their hospitals.

For mothers and lay groups we have the leaflet, "Your Premature Baby," put out by this Division. In the material for mothers' classes, which is now under revision, a section on care of the premature infant will be included.

A committee of two pediatricians and one obstetrician acts in an advisory capacity in this field.

This gives a general outline of the plan of the Massachusetts' premature program. What will be the results of such a program only time can tell. At the end of five years, if not before, something should show in our statistics which will indicate the results of our combined efforts.

As, of late, in medical and surgical wards and laboratories, hospitals and public health departments have worked together to make the state safer for its populace, so now in nurseries, obstetric units and prenatal clinics, they are beginning to wage a similar campaign to save the premature infant.

May Forster Smith—1874-1938

No profession is richer in its traditions of devoted service to those whom the taut drawn strings of life so often handicap than the nursing profession. The great contributions which the nurse constantly makes to the welfare of her people are often unheralded, and are only recalled when she goes to her heavenly reward and exchanges her nurse's cap for an angel's crown.

A few weeks ago a gentle little lady who spent forty of the sixty-four years of her life in caring for the sick babies of Dallas passed away. Twenty-four years ago May Smith started a camp for sick babies with her own funds on the ground of the Parkland Hospital in Dallas. Since that time she has mothered 55,000 of them. She attracted the nurses and the medical profession of North Texas to the service to which she devoted her life. Prominent citizens became interested and contributed to the support of her work. They provided a small hospital for her. This hospital continued to grow, more doctors volunteered for service, a babies' clinic was established, and community support increased.

In 1929, Tom Bradford, a prominent citizen of Dallas, made a long cherished dream of Miss Smith come true. During Mrs. Bradford's last illness, she told her husband, "Tom, when I get up I want to do something for May Smith." Mrs. Bradford never recovered, but in fulfillment of her wish and as a memorial to her, and as a monument to May Smith, the nurse who loved babies so well, and who had devoted her life to their care, Mr. Bradford built, equipped, and endowed the Bradford Hospital for Babies, the first babies' hospital west of the Mississippi.

Miss Smith was a member of the American Hospital Association, past-president of the Texas Nurses' Association and the Dallas Hospital Council.

Hospital Antiseptics and Their Comparative Values

MAX S. MARSHALL, Ph.D., San Francisco

THE number of items available under the class of disinfectants and the number of hours devoted to efforts to sell these substances should indicate the need for a basis of choice. Most persons working in any field allied to medicine have occasion to choose disinfectants, either for purchase or for particular uses. The need for a sound basis for choice is, therefore, real. It shall be our purpose not to meet this demand for a sound basis, for as yet it cannot be met, but to indicate a few ways and means for approaching the practical problem of choice. Since the field is full of disinfectants some of which are presumably good, and since it is also unduly loaded with erroneous ideas, we might take for a motto: "Libel the buncombe and label the disinfectants."

In order to free our minds of prejudice at the outset, it will be well to accept as a disinfectant any substance so labeled, within reason. That is, the conditions under which we wish to disinfect are widely varied. No one has, or should say just what conditions must obtain in disinfection. On this basis, any reasonable substance may be said to have a range of concentrations which, under proper conditions, will kill bacteria. Merging with such a range of bactericidal concentrations will be another set of concentrations which will injure bacteria, or disturb their functioning without killing them. Since we may choose concentrations at will and may change conditions to anything within reason we may say that almost any chemical substance may be legitimately called a disinfectant. This concept is distinctly broader than that which usually prevails, and serves to eliminate the extreme empiricism on which much futile controversy regarding disinfectants rests. If, for example, one takes the time to examine the minutely prescribed conditions supposed to determine whether a substance is an antiseptic or a germicide on the basis of this broader concept, it becomes evident that either substance may be either an antiseptic or a germicide, and the argument falls.

The next step may well be taken by means of a couple of practical examples. Not only may these be used as illustrations of certain points, but, coming within general experience, there may be found some ways of meeting awkward situations involving choice of disinfectants.

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The Author

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Alcohol

One of the commonest so-called disinfectants around a hospital is alcohol. By our broadened definition, we must permit the term to stand in this connection. We assume, then, that over one range of concentrations it can be induced to kill bacteria, and over another range it will injure them. Actually the standard alcohol bottle might better be labeled "Contaminated; handle with care" rather than "Disinfection alcohol, 70 per cent." However, between 50 and 70 per cent alcohol will kill bacteria under ordinary conditions in an hour or thereabouts. Below 50 per cent and above 70 per cent the activity diminishes very rapidly, so that with 80 per cent alcohol bacteria may survive for nearly a day and beyond that a calendar is needed.

In terms of a problem, the question of choice arose when efforts to introduce isopropyl alcohol were made. In the light of pharmaceutical and pharmacologic advice, isopropyl alcohol appeared to warrant consideration. It has a less agreeable odor, but there were said to be no properties which would interfere with its use as a solvent or for similar purposes. In one hospital, in an effort to meet the need for a choice, advice was secured from various sources regarding the general properties of isopropyl alcohol. A letter, with voluminous correspondence, was submitted to the bacteriologist. It was stated that a gallon was on the way for testing, and the request was made that isopropyl alcohol be given a rating as better or worse than ethyl alcohol as a disinfectant. The obvious, but wrong, answer to this problem on the part of the bacteriologist would be to put a few organisms into the two alcohols, attempt to recover them, and to report the results. The actual answer to this request was on its way before the sample of isopropyl alcohol arrived. It stated, in effect, that since isopropyl alcohol could not possibly be worse than ethyl alcohol as a disinfectant, it could be recommended in the same terms that

ethyl alcohol could be recommended. From the standpoint of the potential purchaser of isopropyl alcohol this answer at least has the merit of a definite statement. To those easily distracted by the glitter of test tubes and tables, the answer may seem unscientific. Before that charge is met, another example may be cited to bring out several other points. This example is also a statement of facts as they happened.

Cresols

The representative of a large and reputable firm decided that he would attempt to place a disinfectant, which we shall call C . . . , in a large hospital. He had the backing of a large firm and its code of ethics, a complete knowledge of the data furnished by the company, good training and experience, and a knowledge of the man with whom he was to deal. Armed with pamphlets and samples, he had no difficulty in making an entrance. The conversation, with the usual preliminaries, is brought around to disinfectants. Inquiry is made as to how the disinfection of linen from the contagious disease wards is carried out. The reply is that the linen is soaked in warm 2 per cent liquor cresolis overnight. This appeals to the sales representative as a reasonable proposition, and he inquires the price of liquor cresolis. This, let us say, is given as $0.90 a gallon. The salesman replies, of course with advance knowledge of this phase of the situation, that his product will be $1.50 a gallon in the quantities used in the hospital, but that it is twice as strong as liquor cresolis. It can thus be used on linen in 1 per cent concentration instead of 2 per cent, thereby effecting a saving of $0.15 a gallon. With tradition and experience back of liquor cresolis the hospital superintendent is faced with a need for choice. He knows that the proposed compound C . . . , may be all that is claimed, although he has no reason to suspect deliberate misleading. If he submits easily, he may be in for trouble. He therefore requests a sample, and postpones the decision.

Needing a basis for decision the bottle of C . . . is sent to the laboratory with a request for a phenol coefficient. This is done with little feeling of hope. However, the results might be amazingly good, or sufficiently poor to warrant turning down the sales representative. The laboratory, with a staff of bacteriologists to whom evasion of decision becomes a second nature, is now faced with two alternatives. It may test for the coefficient and return the answer without comment. This is the obvious solution, again, but it is not an honest solution. The test requires considerable time and proportional expense. The answer, if it deviated perceptibly from the figure furnished by the company, would indicate an error on the part of the laboratory and not on the part of the company. It is absurd to suppose that a bacteriologist performing occasional single tests of this sort should produce results which provide reasonable ground for challenging the results of a large company which can not afford to make errors of this sort. The label on the bottle, in this case, is acceptable. The honest procedure would be to take the bottle of C . . . back to the superintendent and discuss the matter with him. In this case, such was done.

Upon inquiry the bacteriologist discovers the method used on linen, with 2 per cent liquor cresolis. The superintendent asks whether the bacteriologist would sanction the use of 1 per cent C . . . The bacteriologist points out that there is a good safety factor in the present method, apparently. No method should approach the danger zone too closely. Such being the case, and C . . . being a reasonable product, the bacteriologist admits that 1 per cent C . . . might probably be used. However, the next question is whether 1 per cent liquor cresolis might not also be used without getting too close to the safety margin, a move which would put the hospital $0.30 a gallon ahead of the producer of C . . . In all probability it could, since the method is quite adequate. Then comes the inevitable question, "Is 1 per cent liquor cresolis under these conditions better or worse than 1 per cent C . . . ?" To this the bacteriologist can reply only that an extended series of tests under the approximate conditions of use would be necessary. The saving would not pay for adequate tests, should the results favor C . . . And the results would obtain only for the use on linen in prescribed fashion with 1 per cent disinfectant.

The sale of C . . . to this hospital having been stopped the representative approached another hospital. The discussion there centered about disinfection of dishes from contagious cases. The product C . . . was advanced, however, on the same basis,—half the price was cheaper than the price of liquor cresolis per gallon. This point was used regardless of the fact that a shorter period of exposure, different concentrations, no heat, and a different class of material was involved. Again the laboratory was approached, and again it honestly declined to make any tests. It reported that there was inadequate evidence to make any tests. It reported that there was inadequate evidence favoring C . . . over liquor cresolis and that it would be very expensive to provide adequate data. The point here may be emphasized by the fact that the laboratory would have made the identical report had this hospital been using C . . . and had the representative been hoping to replace it with liquor cresolis.

The sales representative finally caught up with the laboratory, and the whole matter was discussed impartially. It was made clear that the data provided purporting to show that C . . . was twice as good as liquor cresolis was wholly untenable. It was shown that C . . . might well be ten times as good under one set of conditions and only half as good under other conditions. It was made clear that, if liquor cresolis could be replaced by C . . . on the basis of the evidence presented it might not be a week before C . . . was replaced by something else, if no more substantial evidence was demanded than that which is usually available. The representative reported to his firm, and a chemist rather sternly attempted to show that the laboratory point of view was incorrect but that the representative of the firm was correct. An explanation by the laboratory went to the scientific director, in due time. It seems that this director, when himself a chemist, had attempted to make the points under discussion. There was ample evidence of his sincerity and the firm proposes to do something about the situation.

It may seem that this was a prolonged struggle, but it will be easier another time. Furthermore, the points at stake are worth an effort. Unwise purchasing may have been avoided, the laboratories have been saved unnecessary and profitless activity, and the firm instead of having an unsatisfactory "no" to its suggestions has a clear understanding of the position of the hospitals. It should be borne in mind that at no point has anyone said that C . . . was better or worse than liquor cresolis. There is perhaps a better than even chance that C . . . should be used, but this is not a field for unwarranted chances.

These examples now bring us to an apparently paradoxical situation. It would appear that the laboratory should not or will not provide information, and that there is thus no reasonable way for making a choice of disinfectants under any circumstances. Since no one will admit, surely, that there is never any reason for changing disinfectants, something must be wrong.

Fallacy of the Phenol Coefficient

To meet this paradoxical situation it will first be necessary to make sure that the phenol coefficient or any similar index has been effectually submerged, never to arise again. It has no excuse for existence and never did have, although it must be admitted that a very few of its originators over a quarter of a century ago were shrewd enough to condition the test in such a way that it was partially valid,—but not useful. The test requires apparent disinfection under a set of empirical conditions which can never obtain in a hospital. The type of organism, its age, the medium in which it grows, the size of wire and of loop used, the size of tubes, the amount of broth, the temperature, every minute detail is empirically set up. The reason all this was done is because otherwise the answer is never twice alike. Therefore, with all the assurance gained in demonstrating a theorem in geometry, one may say that changes in a variety of minor conditions by a small degree will change the results, and results which change with slight changes in conditions not practical to begin with can hardly be useful, as index values. Numerous practical and theoretical or experimental data could be brought to bear on this question, leading always to the same conclusion. Some will be implied in consideration of more profitable phases of the question.

There are numerous perfectly practical factors which influence the results of the action of a disinfectant on bacteria. Of these the change in activity when the concentration of disinfectant is changed is perhaps as important as any. Some substances, for example, increase their activity many times with a slight increase in concentration, yet others increase their activity only slightly. Phenol under some conditions may increase its action over sixty times when the concentration is doubled, whereas mercuric chloride will increase its action only about two-fold under the same conditions. There is evidence which suggests that some of the modern mercurials increase their activity less than twice for a doubled concentration. This point, which might seem offhand to favor phenol, works both ways of course. Halve the concentration of phenol, and the activity may be reduced over sixty times. The same applies to the other illustrations, leaving phenol as a substance, speaking in general terms, which is very effective in usable concentrations and quite useless when weakened and the modern mercurials as substances which are almost never germicidal (gradually reaching mildly germicidal concentrations) but also almost never without some inhibiting effect in extremely weak concentrations.

Reverting for a moment to the problem of liquor cresolis and C . . . , suppose that C . . . increased its activity forty times when the concentration was doubled, and liquor cresolis only twenty times. Then, if these products produced equal activity at 2 per cent concentrations, C . . . would be only half as effective at 1 per cent. If C . . . really had been twice as effective at 2 per cent, at 1 per cent they would have been equal. Without data, no one can predict the results. The results, furthermore, would differ with differences in other conditions.

Other influential changes in environment include the type of organism, its age, and the number of organisms to be killed. The acidity or alkalinity and the oxidation-reduction potential may alter the results with a given disinfectant sharply. The presence of traces of metals, of certain salts, of organic matter, and the type, concentration and distribution of the organic matter may make all the difference between good disinfection and no disinfection at all. These changes, and many others, are not hypothetical but are perfectly practical changes occurring in all situations demanding the use of a disinfectant. And the resulting difference with a given agent is not pusillanimous but is substantial. There is no need, probably, to multiply examples. They sum up to a general statement: that various factors operating in all practical disinfection influence the activity of the disinfectant, but in a degree which differs with every disinfectant. Since these factors operate at one and the same time, some idea of the magnitude of the task of providing reasonable laboratory data becomes apparent.

Choice of the Disinfectant

Let us now revert to the original question of the choice of a disinfectant. We sought not the answer but a rational basis for seeking the answer. It becomes increasingly clear that disinfectants cannot be relatively evaluated at all. This somewhat startling conclusion is not as radical as it may seem. In fact, a square look at the thesis of relative evaluation furnishes much food for thought. By and large, in choosing an automobile we attempt to weigh certain merits with regard to our own purposes and preferences; we do not insist that the car we buy is "better" than its competitor. We may have certain preferences among our neighbors as associates for picnics or bridge, but we do not insist that one is "better" than another. In short, choices are made more because we accept the fact that there are differences among the individuals of a group or class rather than because we insist that one member of the group or class is "better" than others. Suppose, for example, we had to choose the better of two loaves of good bread, one bakery bread and the other made by a housewife, or the better of two bottles of wine, one dry and one sweet. Hours of argument would leave the questions undecided. By setting up elaborate specific criteria we might arrive at a decision, but, justifiably, no one would agree to the conclusions thus determined.

Or, suppose we look squarely at the mere arithmetic of arranging a group of disinfectants in a given order or purported effectiveness. If we have five substances, we can make 120 separate orders of arrangement; with six the number jumps to 720; with seven it goes to 5,040; with ten it exceeds 3,000,000. Out of all these possibilities is it reasonable to expect a laboratory to choose the one and only arrangement? Since minor changes in practical working conditions will materially alter the arrangement, the shiny table or index furnished by the laboratory is wholly artificial, not an answer but a false excuse for any desired action. In fact, given a few reasonable disinfectants, any laboratory may legitimately contract to arrange the group with the chosen disinfectant on top, with evidence to "prove" its point. It is necessary merely to juggle the conditions in the right direction.

The conclusion seems to be inevitable. Studies must be directed toward reasonably complete studies of what each disinfectant may be expected to do under given conditions, and not toward comparisons at all. This is not impossible. With bread, wine, automobiles, vaccines, and presidents, weeks and years are spent in determining the intrinsic qualities of each. In six months or a year a competent bacteriologist with one disinfectant only to study, would have a very fair idea of what might be expected of that disinfectant. This has not yet been done, on this basis, with Lister's carbolic acid.

Thus far the groundwork seems to be safe in both practical and theoretical aspects. It may be permissible to insert a bit of idealism which, even so, may be supported by certain evidence as not unduly fantastic.

To demand a reasonably complete story as to what a given disinfectant may be expected to do under various conditions before we consider it for choice does not seem unfair. At the moment such a demand would give no choice at all, but there are large numbers of persons whose demands would be heard because they purchase disinfectants. There are large numbers of students and research workers whose labors might profitably be directed toward the development of information. This demand, on the one side, would place the burden chiefly upon commercial houses, but there is little doubt that the better houses would meet that demand. There is little doubt that smaller houses would attempt to imitate and would produce valueless data, and the very fact that data may be easily shifted experimentally to indicate false results would require constant watchfulness. On the other side, civic units and educational institutions are in a position to acquire more or less impartial data, covering gradually those substances the sale of which is the right of no firm exclusively. Such units may serve within

reason to check the more dubious commercial data if it emanates from a proper source. Legal control is slow and cumbrous, but a beginning might be made and is being attempted by removing from the statutes requirements for antiseptics and germicides which are entirely superficial. These suggestions savor of excessive idealism, and the amount of work involved is not inconsiderable. Since, however, many of the present popular conceptions are not well founded it would seem that a degree of improvement might be attained.

What, then, is the basis for choice of disinfectants? There must first be a broadening of viewpoint. Instead of submitting to an excess of prejudice disinfectants may be viewed as a class of legitimate substances nearly all of which have some virtues. There is a zone of concentrations and conditions which will bring about a degree of bacteriostasis, a degree of injury or inhibition of vital functions. There may also be, and usually is, a range of concentrations and conditions within which death of bacteria may be expected in due time, although this time may be too long for many purposes. With this broadened viewpoint must go a clear picture of the fact that general relative evaluation of disinfectants is wholly irrational. The superficial laboratory test means virtually nothing. It is necessary to study the potential virtues of each disinfectant by itself, and to make a choice on the basis of a knowledge of these virtues relative to the particular procedure in mind.

More specifically, the points for which an answer is desirable are numerous. Scientifically they are too numerous for a complete answer, but practically this is not true. It is desirable to know what effect the disinfectant will have in the presence of organic matter, not as such but in different quantities and of different quality,—sputum, saliva, blood, serum, feces, urine, food. It is desirable to know what, with some conditions varied, the substance will do when its concentration is reduced or raised,—how rapidly it increases or decreases its effectiveness when the concentration is varied. It is well to know what influence metals or salts within reason will have upon its activity. One should have information regarding its effectiveness in moderately acid or alkaline solutions, or in the presence of active oxidizing or reducing substances. Consideration should be given to its action on cotton, silk, wool, dyes, paints, metals, and other inert substances to which it may be exposed. The toxicity should be known not by a standardized procedure but in a general way toward the eye, buccal cavity, urethra, gastro-intestinal tract, normal skin, and injured skin. It is well to remember that the infecting bacteria which produce spores, namely those of anthrax, tetanus and gas gangrene will resist virtually any disinfectant for hours and even weeks. One should have information regarding an adequate number of types of bacteria, exposed under different conditions with regard to the organisms, in order to limit properly the scope of the disinfectant. No index is going to cover these points; no laboratory is going to be able to provide answers inexpensively and quickly.

To the query "How does one choose a disinfectant" this seems to be the nearest plausible answer. To the many irrational arguments used in an effort to influence the choice there must be opposed a demand for rationalization. If this requires that, to a certain extent, we must begin over again, then we must begin; it is because Pasteur and Koch, unhampered by tradition, built more solidly in this very field than have the majority of workers since their time.

James A. Hamilton Accepts Superintendency of New Haven Hospital

James A. Hamilton, for the past two years superintendent of the City Hospital, Cleveland, Ohio, and formerly superintendent of the Mary Hitchcock Memorial Hospital, Hanover, New Hampshire, has been appointed superintendent of the New Haven Hospital, New Haven, Connecticut, to succeed Dr. Albert W. Buck, resigned, and now administrator of Charlotte Hungerford Hospital, Torrington, Connecticut.

Before entering the hospital field Mr. Hamilton was assistant professor of industrial management at Dartmouth University. He was brought to Cleveland to start the rehabilitation of the City Hospital. His accomplishments at this institution have attracted the attention of hospital administrators throughout the United States. Mr. Hamilton is prominent in the affairs of the American Hospital Association. He was a member of the Committee on Membership Structure and Association Relations, and is chairman of the Committee on Personnel Relations under the Council of Administrative Practice.

The New Haven Hospital is affiliated with the Yale Medical School of Yale University, and is one of the prominent hospitals in New England. Mr. Hamilton will take over his new position on or about July 1.

Accidental Injuries and Hospitals

JOHN E. RANSOM, Baltimore

WITH the development of industry and of mechanical transportation there has come a great increase in the number of injuries both disabling and fatal, caused by industrial and vehicular accidents. At first most of such accidents occurred in factories, mines, and on railroads. But as the manufacturing and mining industries and the railroads have been bringing about a reduction in their accident rates by means of concerted and intensive efforts towards greater safety, the development of motor vehicle transportation has produced new hazards to life and limb, and takes an increasing toll of killed and injured with each successive year.

With respect to deaths due to accidental causes, the United States has the highest rate of any country, with the possible exception of Chile. In 1937, the Metropolitan Life Insurance Company published a book entitled *Twenty-Five Years of Health Progress*. We quote the following from that book:

"In 1934, the most recent year for which data are available, more than 100,000 persons in this country were killed in accidents of one kind or another. These deaths constituted 7.2 per cent of all persons who died that year and occurred at the rate of 80 persons for each 100,000 of population. In Canada, where conditions of life closely resembles those in the United States, a death rate of 49.7 per 100,000 was reported in 1934, or almost 40 per cent below that for the United States. The death rate in this country was almost twice that for England and Wales or New Zealand; more than double that for Italy, Denmark or Belgium. An even greater disparity exists between American rates and those for some of the other European countries."

Our bad record may be due in part to a greater recklessness on the part of the American people, but more certain and perhaps less blameworthy causes are apparent. We have more automobiles; more miles of railroad; a greater number of and more highly mechanized industries; we build and live and work in more high buildings, than do any other people.

Taking all types of accidents, the mortality rate for the period 1911 to 1915 was 6.3 per cent of all deaths; from 1926 to 1930 it had risen to 7.4 per cent; from 1931 to 1935, the depression years, it dropped to 6.9 per cent. In the period 1926 to 1935, of the 102,238 deaths from accidental causes

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21,905 or 21 per cent may be classified as domestic

56,600 or 56 per cent may be classified as public

13,637 or 13 per cent may be classified as occupational

10,096 or 10 per cent may be classified as unspecified.

Classification as to chief causative factors is as follows:

	Per cent
Automobile	33.5
Falls	15.6
Drowning	10.4
Burns (not in conflagrations)	7.3
Railroads	5.5
Absorption of Poison Gases	3.3
Firearms	2.5
All others	21.9
Total	100

Industrial and Motor Vehicle Accidents

Hospitals, though they may be concerned with the treatment of persons who have been injured in accidents of all sorts, have a particular problem with two major classes—industrial and motor vehicles. Naturally their concern is more with those who are injured in accidents than with those who are killed outright. On the number of persons who are injured in accidents of various types there are no such reliable statistics as there are with reference to accidental deaths. But it may be assumed with plausibility that with the possible exception of drowning, the figures and percentages given for deaths may be applied to injuries with a fair degree of accuracy. It may be assumed also that the greater number of persons who seek hospital care for accidental injuries have been involved in either motor vehicle or industrial accidents. It is also a fact, though there may be no published statistics to verify it, that hospital patients of this type have greatly increased in number in recent years.

The care of patients injured in industrial and motor vehicle accidents presents several problems

to the hospitals concerned in their treatment. One of these problems has to do with providing adequate care. Since such accidents, particularly automobile casualties, may occur at any time of day or night, hospitals must have their accident service so organized as to be able to render prompt and efficient service at all hours. The hospital must see to it that those who render this service are qualified. This means that it must develop a system of training members of its house staff for the treatment of fractures and other serious injuries; see to it they know under what circumstances they must consult with more experienced surgeons; that they make no mistakes in deciding which patients may be discharged without admission to the wards and which must be admitted; know how to deal with excited relatives, the police, newspaper reporters, and the like. It must have x-ray service available at night as well as during the day. The fact that automobile accidents have brought this new problem to hospitals which were not organized to handle it, has not impelled all hospitals that deal with it to make ample provisions for meeting it adequately.

Meeting the Cost of Hospital Care of Accident Victims

Another problem arising out of the care of accident victims is that of meeting the costs of the service rendered. In the first place these cases are not patients of the hospital's choosing. They are brought to the hospital in need of emergency treatment and if that treatment entails admission to the ward, such admission can hardly be denied them. But hospital service costs money and the hospital must find the money.

In so far as industrial accident patients are concerned, this problem has been met, in part at least, by the provisions of Workmen's Compensation Laws which have been enacted in 46 of the 48 states. Under these laws, employers or their insurance carriers are made responsible for the expense, or perhaps a part of the expense, of the medical and hospital care injured industrial workers may need. In some of the states the amount of this liability is not limited but in the others it ranges from $100.00 to $800.00. In some states this limited liability is entirely inadequate in many cases. Under these conditions, amendment of the workmen's compensation laws is the only solution. (See "Hospitals and Workmen's Compensation," by John E. Ransom, *HOSPITALS*, October, 1936.)

With automobile accidents the situation is entirely different. There is no individual or firm, like an employing industry, whose responsibility for paying hospital costs is fixed by law. There is little or no compulsory liability insurance for owners of motor vehicles. As it is now, one might well describe an automobile accident in these words—"Two automobiles collided at A Street and 1st Avenue. One passenger was killed and three were injured. St. Luke's Hospital was damaged to the extent of $870.00." This does not mean that the physical properties of the hospital were involved in the accident but that the three injured persons were taken there and no one paid the hospital for their care. The damaged automobiles may have been taken to a repair shop but no one expected the proprietor of that shop to recondition them free of charge. But with the hospital it is different. It is supposed to be a charitable institution. However, the costs of rendering service to free patients are just as real and must be met in the same way as are those of paying patients. Someone must pay. If there could be subtracted from the deficits of our voluntary hospitals, which deficits have been very considerable during the past decade, the unmet costs of caring for the victims of automobile accidents, those deficits would be reduced materially, and in the case of some institutions, wiped out entirely.

Hospitals may and do collect some of their bills for this type of service, either in the whole or in part. The extent to which they collect is directly proportionate to the effort they make to cultivate this source of potential revenue. Much depends on prompt contact with the parties concerned, on careful follow-up of these accounts and on the establishment and maintenance of cooperative relationships with insurance companies and lawyers.

Lien laws help hospitals materially in those states in which such laws have been enacted. Ohio has a law which provides reimbursement, out of public funds, to hospitals for the care of the indigent victims of automobile accidents.

But with all that has been done—and that all is not very much—to help hospitals meet these costs, accidents produce a heavy drain on hospital resources. There is only one solution and that is concerted and persistent action on the part of hospitals to obtain through legislation, relief from a burden which an indifferent public requires them to bear.

American Hospital Association Convention,
Dallas, Texas, September 26-30

Standards and Approval Program for Non-Profit Hospital Care Insurance Plans

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AT THE Atlantic City meeting of the American Hospital Association in September, 1937, the Advisory Group of Hospital Service Plan executives requested that the American Hospital Association, through its Committee on Hospital Service, establish standards and approve officially hospital care insurance plans which are organized and operated in conformity with those principles. This authority was granted by the Trustees of the American Hospital Association, for it was pointed out clearly by the Advisory Group that such approval would be valuable in assisting good plans and would be useful as a weapon against quack schemes and fly-by-night chiselers.

The standards were formulated in consultation with the Advisory Group of Service Plan executives and require little explanation. The complete statement appeared in the February issue of *HOSPITALS* and may be briefly summarized as follows: (1) adequate representation of hospitals, medical profession, and public; (2) non-profit sponsorship and control; (3) participation by the majority of hospitals of standing in each community; (4) provision of benefits through service contracts with member hospitals rather than through cash indemnification for hospital expenses; (5) adequate working capital and financial reports; (6) adequate subscription rates or premiums; (7) sound accounting procedures; (8) complete actuarial data; (9) segregation from hospital finances; (10) reasonable payments to hospitals; (11) dignified promotion and administration; (12) hospital service benefits determined by customs of the community; (13) non-interference with relationships between hospitals and their staff; (14) general approval by the Committee on Hospital Service of the American Hospital Association.

Too much emphasis cannot be placed upon the opportunity for all hospitals of standing in a community to participate in a non-profit hospital insurance plan. Single hospital plans do not provide free choice of hospital, are competitive in practice if not in design, and are opposed to the best interests of the community. Moreover, free choice of hospital is not enough. There should be joint sponsorship of non-profit hospital insurance plans by the public, the medical profession and the hospitals.

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Standards Are Necessary

To many of us, the word "standards" is irritating because so often it suggests regimentation, dreary sameness and the wearing by all women of one kind of hat. We realize, however, that while an individual in his isolation may set his own standards, he must conform to some code as soon as he becomes a member of a group or a part of a program. When the first hospital insurance plans were started, the only standard was that of fairness and the only yardstick was that of faith, hope and common sense. In the beginning in some communities, a joint effort by more than one hospital was impossible and single hospitals had to take the lead.

Then the importance of group hospitalization began to be recognized. The first push was given by hospitals and the first endorsement of the principle of insurance for hospital care came from the American Hospital Association in 1933. Not long after came similar action by the American College of Surgeons. The publication in 1933, by the Council of the American Hospital Association, of a booklet, "Essentials of an Acceptable Plan of Group Hospitalization," was the first attempt to guide the new movement as an agency of public welfare and to avert the dangers of exploitation. Hospital insurance was under way. Slowly at first, but gathering momentum as the public realized its possibilities, it has attained a speed which can be stopped now only by stupidity or social disorder. However, the faster the progress, the more the need for stabilization.

One of the charges conjured by critics is that the hospital insurance program began as a depression device to put dollars in the hospital's depleted budgets, but this child was born under the sign of Taurus. It was in the Bull Market days with American Tel. and Tel. at 310 and two

Presented at Mid-Winter Conference of Hospital Service Plan Executives, New York City, February 17, 1938.

chickens and a second mortgage in every pot. To Dr. Kimball in Dallas, Texas, goes credit for applying to the non-profit hospital field a principle of periodic payment which had obtained here and there in industry for many years.

These plans have helped hospitals. It is more important, however, that they have helped the public to put hospital care in the family budget. For physicians, they have been of so much benefit that many of those who came to scoff are now remaining to pray that a similar principle will be applied for the payment of medical service.

Contributions of Hospitals to Development of Hospital Service Plans

Many of the present plans were given their financial start by loans from hospitals. Agreements between the service associations and the participating hospitals provide that hospital care shall be rendered to contract holders even though the specified per diem payment cannot be made in full. Participating hospitals underwrite the plan, they guarantee to fulfill its contracts, and they "hold the bag." There is a real reason, therefore, why the American Hospital Association should concern itself with a program of approval.

In some instances hospital trustees and hospital administrators have failed to regard hospital insurance from a community point of view. Not long ago a hospital superintendent told me he saw no need for hospital insurance in his city because he had no difficulty in getting enough paying patients for his hospital. In some localities, hospitals have bickered up to the birth of a plan and have been balked because the per diem payment would not equal their charge for a high priced private room. Such stupidity is deplorable. On the other hand, in most communities where non-profit hospital service plans are in operation, the hospitals have given invaluable material and moral assistance through their trustees and executive officers to these plans and it would be unfair if their efforts were not recognized.

Here and there in the exuberance of success, there are signs of impatience by executives of hospital service plans. There is a temptation to disown the foster parents—the hospitals—and as the child begins to walk and fend for himself, there is a tendency to forget the days when he could barely crawl and when parental help and protection were needed. As an active participant in the hospital insurance program since 1932, I sincerely believe that the success of these non-profit plans and the success of non-profit hospitals are interdependent. In the same manner, this organization will become more effective and more popular in its appeal to the public if hospital service plans maintain a close working relationship with the American Hospital Association through the Committee on Hospital Service.

Starry-eyed advocates of social justice may press for quicker conversion of the heathen to hospital insurance. This enthusiasm is commendable only when it does not replace caution, common sense and good accounting. Size is not the most important gauge of success of hospital insurance plans.

Impending Changes and Developments

Hospital insurance will have many developments and changes in the next few years. Ward service plans will provide hospital care for a group not adequately reached by most existing plans. There may be mergers in some areas and reciprocal arrangements in other areas. Rural regions will be served, family coverage will be more generally offered, and protection will be available to individuals as well as groups.

All this will need much thought and careful study. It will require team work between service plans and the hospitals around which the plans are organized. It is not the purpose and will not be the purpose of the Committee on Hospital Service to plead the special interests of hospitals or of hospital service plans. With as much fairness and good judgment as human frailty can offer, we shall try honestly to assist the general program of periodic payment for hospital care.

Commercial or cash indemnity plans have proved to be ineffective compared with the non-profit service plans which are represented here today. The propriety of sponsorship of the approval program by the American Hospital Association lies in the "service contract," which makes the hospitals responsible for the provision of service. The subscriber is entitled to hospital service guaranteed by contract with member hospitals, rather than merely to cash indemnity guaranteed by a reserve fund or subject to assessment upon policy holders.

Approval Program Will Stimulate Development

Hospitals should study carefully the types of plans to which they give their support. The Committee on Hospital Service hopes that its approval program will encourage and aid plans which clearly meet these standards, and will stimulate new plans to be organized along sound lines which will protect the interests of the public, the hospitals and interested professional groups. Furthermore, a close affiliation between this group and the American Hospital Association will be a strong support of the principle of the voluntary hospital insurance program. Governmental agencies are watching carefully our progress and probably will be loath to intrude if they observe consistent growth with sound planning.

Not long ago in a radio broadcast on hospital insurance, sponsored by a County Medical Society, a line was deleted by the Program Committee of the Medical Society in which I referred to the local service plan as an "agency of public health and public welfare." However with proper standards, competent guidance of effort, a continued community interest and close hospital affiliation, nothing can prevent hospital care insurance from being just that—an agency of public health and public welfare.

Non-profit hospitals have an obligation to make their services available to the largest possible proportion of the public requiring hospital care. The device of group budgeting through equal and regular payments has been of genuine value to nearly a million employed persons and their dependents. The expansion of the movement requires that participating hospitals assume ultimate responsibility for the provision of service at reasonable rates of payment from the hospital service associations. There cannot be any long-run difference between the economic interests of the subscribers to non-profit insurance plans and the non-profit hospitals in which care is provided. The public owns the hospitals and the public welfare must be served in the financing of hospital care. Hospital service plan executives have a unique opportunity to develop an American type of health insurance, without profit, without charity, and without undue political interference. If subscription rates are established at the lowest possible levels consistent with provision for emergencies and adequate payment to the participating hospitals, the prediction of ten million subscribers within five years may become a reality.

The American Hospital Association proposes to lend full support to non-profit hospital care insurance plans in their efforts to improve the public health and welfare. The "approval certificate" will be evidence that a plan is organized for greatest service to the subscribers and with the guarantee of service through specific contracts with the hospitals of standing in each community.

Blood Banks

The establishment of blood banks is a new but rapidly spreading demand on hospitals. They take two forms, those for normal blood for transfusion and those for immune blood for the specific therapy of infectious diseases.

Yudin demonstrated the practicability of preserving cadaver blood and the clinical advantages of assuring its superiority both by necropsy on the donor and by ample time to perform all desired tests on the blood specimen itself. For sentimental reasons the American patient is not yet ready to accept cadaver blood and so must forego the added safety afforded by a necropsy on the donor.

The average patient requiring a transfusion is at best in a near emergency condition and the delay in finding a donor, securing the blood, typing and matching may well spell the difference between success and failure. Serological tests for communicable disease of the donor too often go by default.

The normal blood bank has the advantage that the blood is already on hand, has been both serologically tested and typed and cross matching is all that remains to be done—this involving a delay of minutes as compared with hours in the case of a donor for each patient. Even the periodical examination of professional donors gives no assurance that they have not acquired transmissible disease since the last periodic examination.

In the operation of the blood bank, a donor is sought the same as in the direct donor plan. Often two or three donors may be bled. But the patient receives blood from the bank without delay while the blood secured from the donor or donors is serologically tested and typed and if found usable goes into the bank to replace that given the patient. The accepted practice is not to preserve each donor's blood separately but to pool several specimens of the same type as many as fifteen or twenty in a single mixture.

Containers are dated and kept in the refrigerator at 40c (39° F.), each type in a separate compartment to guard against carelessness or loss of label. The better practice after pooling the blood is to transfer it directly to the container, and for the transfusion to obviate any further handling and its possibility of contamination.

Similar principles govern the operation of the immune blood bank. Though the arrangement for securing the "immune" donors presents many added difficulties.

The operation of a blood bank must be under the continuous control and supervision of a highly skilled pathologist and to be satisfactory must have a comparatively large volume of patients and donors available. Only the largest hospitals in the community should undertake it, and these should enter into arrangements with the other hospitals of the community to secure blood from their donors and to furnish it for their patients.

The Properly Run Record Room

ESTELLE P. ORD, R.R.L., Cambridge, Massachusetts

IN THE days of long ago no special arrangements were considered necessary for the specific care of medical case histories. Today the medical record has attained a conspicuous place, particularly in institutional work, and its value has become fully established.

The accurate recording of the treatment of the patient by the physician is of inestimable value. Good medical records invite and stimulate research. They are available for the benefit of the patient, and afford protection to the physician in any legal complication. Through this medium many of our medical problems are solved; the physician can assemble for examination, study, and further investigation, cases of similar or contrasting nature. Hospital records are destined to play an even more important role in the future, in the field of research, and will be a monument to the type of service rendered by the hospital to the community.

Record Room Essentials

Since the records department has become a definite part of the hospital, a suitable location for it is always considered when planning a new hospital, but the small hospital which has gradually expanded over a period of many years is handicapped in its choice of a record room site.

It is essential that the record room be centrally located, so that it may be conveniently accessible to doctors on their visits to the hospital. We often find it adjoining the room provided for the use of the doctors, known as the *doctors' room*; or if located near the operating room, pathological laboratory or x-ray department it affords an excellent opportunity to contact not only those departments, but the doctors who visit them frequently. Its close proximity to the out-patient department eliminates the use of messenger service where the installation of a mechanical carrier system is not practical. The location of this department must, therefore, in many instances, depend upon the space available with reference to other departments.

Good light is essential, and artificial lighting cannot replace daylight.

Each record room worker will require a suitable desk and a good typewriter, preferably noiseless, as the elimination of the noise element makes for efficiency.

Adequate working space for handling histories is a necessity, even though only one person is engaged in the record room work. A large table or a long wall table may be provided, where histories brought from the wards can be received and sorted. Lack of sufficient space for this phase of record room work will cause confusion and a consequent waste of valuable time, as the majority of hospitals feel that they can supply no more than a minimum of assistance for this busy department.

We must not fail to provide a table, always available, for the exclusive use of the doctor where he may enjoy privacy for any task which brings him to the record room.

Interns and student nurses visit the record room from time to time for the study of case histories, and a table should be provided for their use. If lack of floor space makes this provision impossible, it is often necessary for a record room employee to relinquish her desk, thus delaying her work, in order to accommodate such visitors. The record room is a place for the safe preservation of records and all reference work should be conducted there.

Files

Standard files with good roller bearings are in general use for filing the finished record. Such files are sturdy, and withstand constant usage over a period of years. The record form is usually of 8½ x 11 inch dimensions and is enclosed, for filing, in either a manilla folder or envelope. A few hospitals still bind their records.

Files must be provided for the various types of card indexing, in accordance with the program of the individual record room. This will include, principally, an index of patients' names and a catalogue of diseases and operations. A standard make of file should be selected. This will permit building

The Author

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up, by the addition of matching sections as required.

Cards which are subject to constant use, such as those in the patients' name index, should contain enough rag composition to insure good wearing qualities. The same rule applies to the paper which is used for permanent records.

Storage

Sooner or later every hospital must resort to the storage of its case histories. Here again the small hospital which has expanded must suffer, as storage space conveniently near its records department is seldom available.

Substantial cardboard boxes for filing purposes are manufactured in a variety of sizes and may be satisfactorily used for storing cards or case histories. These boxes are a boon to the record room with limited floor space. As the capacity of card files is exhausted material may be transferred to boxes of appropriate size and marked for identification. High shelves may be installed in the record room for storing them, making them easily accessible for use. Boxes holding about 50 average sized records may be used for filing old records, which can be marked and transferred to the storage space provided.

Trained Record Librarian Needed for Efficient Service

Having established the record room and equipped it, a trained record librarian should be installed and assistants provided.

The employment of a record librarian in itself indicates the importance of record keeping. The record librarian acts as an auditor of the hospital vital statistics and her work calls not only for training, experience, and a knowledge of medical terminology, but for accuracy, initiative, tact, and an unbounded measure of patience and persistence. Efficient service can best be rendered by a registered record librarian.

Among others engaged in professional work, the record librarian should ever seek a wider knowledge of the constantly changing methods of procedure in the field of her choice.

It is of the utmost importance that every record librarian become a member of her nearest Association of Record Librarians and that she attend its meeting regularly. There she will find assistance in solving any problems which arise in her daily routine. She will gradually accumulate a knowledge of what other hospitals are doing which will reflect to the benefit of the hospital which employs her. Her participation in the constructive programs of her Association and her opportunity to keep well informed upon record room and kindred topics, through the medium of the periodical issued by the Association of Record Librarians of North America, will be of great value to her and to her hospital.

System of Record Keeping

A decentralized or a centralized system of record keeping may be used, with either a serial or a unit system of numbering admissions. The decentralized system is gradually being replaced by the centralized.

Under the serial system of numbering, a readmitted patient is given a new number and the record of former admission is brought forward to the new file, a sheet recording the transfer taking its place in the original filing space. Under the unit system of numbering, all readmissions are filed under the original admission number and all records of entry are held permanently under that number.

The so-called Admission and Discharge book is familiar to all. This may be a loose leaf or bound type. In this book is recorded daily, from admission slips, all data of statistical importance, with the serial or unit number, and upon discharge of the patient the date of discharge, the number of days' care, and the diagnosis.

The record room should receive daily a midnight census slip from each ward. This census should correspond with the patients' cards held in the record room. By checking the census slips with patients' cards an accurate daily count is obtained.

Accuracy of Completeness Essential

The record librarian must know the component parts which make a complete history, and she should carefully maintain a uniform arrangement of the various history sheets. It is within her province, and it is her responsibility, to check histories for any discrepancy or omission and request a correction. Every hospital case history should be considered a potential court case, therefore the highest degree of accuracy and completeness is essential. Completed histories may be reviewed and evaluated by a records committee and a report of their findings made by them to the staff.

Requests for abstracts of records should receive prompt attention, as such requests often indicate an immediate need for the information. The legal and ethical procedure associated with this service must be fully understood by the record librarian, as the protection of the interests of the patient, the physician, and the hospital is of paramount importance.

Index of Patients' Names

It is desirable to maintain a perpetual index of patients' names, in order to afford ready reference to admissions over a period of years. Economy in a given filing area can be accomplished by using a card of small dimensions, and a 2 x 3½ inch card will provide ample space for posting all data necessary for the identification of the patient and reference to his file number.

The spelling of patients' names, on admission, is an ever present record room problem. In a community made up of a large foreign population the misspelling of a name, because of language difficulty, may mean loss of identification of the patient. The use of a phonetic or sound code method of indexing patients' names will go far toward the elimination of this problem.

A visible sub-division guide should be used for every 25 or 50 cards in the patients' index, in order that filing and constant reference to this important file may be facilitated. Guides with celluloid covered tops are desirable because of their durability.

Catalogue of Diseases

A catalogue of all diseases recorded in case histories is maintained primarily for research purposes. A single 3 x 5 inch card is often used for each diagnosis and its identification data, with the principal disease posted in black and complications or secondary diseases cross-indexed in red. If no separate card index is maintained for the classification of operations, the operation may also be posted on this card. A saving of filing space may be accomplished by using both sides of a larger diagnosis card, posting as previously described. Thus 30 or 40 entries of a similar disease may be posted, in black or red, on one card.

The use of a classified nomenclature of disease for reference by the physician in recording diagnoses on case histories enables the record librarian to properly classify and file such diagnoses for reference. For this service the *Classification of Diseases,* published by the Massachusetts General Hospital, has been in extensive use for many years. *The Standard Classified Nomenclature of Disease,* compiled by the National Conference on Nomenclature of Disease, is now available and has been adopted by many hospitals. The trend appears to point to the universal use of a uniform classified nomenclature.

The hospital administrator may wish to have a report of the number of patients sent to the hospital by each doctor. Such a report is readily obtained by referring to the Admission and Discharge book, and the report may be filed on cards.

Weekly or monthly follow-up clinics are generally a part of the hospital program. It is the duty of the record librarian to have records required for clinic use in readiness at the proper time. She should also record the results of the clinic work.

The record librarian must compile monthly statistical reports of various types. She has at her finger tips information of all sorts which can readily be compiled into any type of report which may be required by the administration or for questionnaires received from various agencies. Such reports must necessarily be a source of gratification to the record librarian, who sees before her a concise summary of her past month's efforts. By the study and comparison of these reports she may be inspired to improve her service to the hospital.

Cooperation Develops with Understanding of the Function of the Record Department

One of the greatest drawbacks to the efficient progress of record room routine is the incomplete case history, long overdue. This problem is being met in many hospitals today. A ruling passed by the staff or made by the administrator, requiring the completion of histories within a specified time, will correct this difficulty; but the ruling should be strictly and impartially enforced.

While the record librarian is definitely responsible for properly conducting her department, an occasional complication will arise which must be referred to the administrator, and the record librarian fully appreciates the cooperation of a busy superintendent who is always ready and willing to grant an interview.

The record librarian's work gives her an insight into and a relationship with every other department in the hospital. The nursing body should have some knowledge of the function of the records department, with which it is so closely associated. Contact of other departments with the records department gives an opportunity for better understanding, and such understanding is certain to bring about better cooperation. Cooperation is a step toward harmony, and harmony should reign in the hospital, which is really a community in itself.

Arrange Your Program for Hospital Day, May 12

The Hospital Engineer

JOHN H. HERZOG, San Francisco

IN the last 50 years much progress has been recorded by the hospitals, much has been said about medical science, its inventions, and its gallant fight against the deadly diseases, but seldom is the hospital power plant mentioned at hospital conferences and conventions. Has the engineer, and the mechanical plant of the hospital kept pace with the wonderful progress of the medical profession?

A recent survey of the plants of several of the larger Eastern hospitals showed a differential of 3 to 9 per cent of the total yearly expenditures was spent for fuel and power. In other words, some hospitals spend three times more for fuel and power than others spend, although having the same number of beds. Perhaps replacing and modernizing some of the antiquated and dilapidated power equipment would show better results. A survey of the power and maintenance costs in many hospitals would reveal some surprising facts.

There has been much controversy about the advantages of the private power plant, and the convenience of purchased power. As a rule much depends on a favorable heat balance which means that a private plant is justified whenever the exhaust from the prime mover can be used advantageously.

Thirty years ago practically all hospitals with a capacity of 100 beds and more generated their own electricity which was direct current. They had to depend on their own equipment for light and for power to run their elevators and motors. Everything went along smoothly while the equipment was new, and mainly because the engineers who were responsible for the upkeep, and the running of the machines were steady, reliable, and capable.

Then the war came. People became restless. Many engineers found more profitable employment in shipyards and industrial plants. Other engineers were replaced by the so-called "handy man"—who can do a little of everything, and generally do nothing thoroughly. The generating equipment was neglected and needed repairs, questionable contractors charged fancy prices for inferior work which ordinarily the engineer in the plant would have done himself. The result was that continuous shut-downs occurred, and repair bills had to be paid.

Presented at the Convention of the Association of Western Hospitals and the Western Conference, Catholic Hospital Association, San Francisco, California, February 28 to March 3, 1938.

The Author

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Buying Electric Power

In the meantime the utility companies began to improve their often interrupted power service by interconnecting different supply systems, and most of all cut the cost per kilowatt-hour. Their rates came down from as high as 5 cents per kwh. to as low as 1 cent per kwh. Alternating current, too, gradually took the place of direct current. The power company sales engineers at this time had little trouble convincing the plant owner of the convenience and advantages of purchased power. Today many hospitals buy their current. However it would be advisable, and it is even compulsory in several states, that every hospital has two sources of power supply—either purchased power with stand-by generating equipment or a private plant with emergency outside service. The power company has various rate schedules under which power can be purchased, and it is up to the engineer to get the most favorable schedule for his plant.

Heating System

The heating system of the converted plant should differ much from the plant where power is generated. With generating equipment a pressure of 4 lbs. and more is carried on the heating main, where live steam is used for heating 0 lbs. or subatmospheric pressure (—pressure) should be used. In order to heat a room to 70° F. why use 5 lbs. pressure or 227° F.—a differential of 157° F., when 0 lbs. or even —5 lbs. = 165° F. with a differential of only 92° F. will give a milder heat and the desired results. All excess heat will only damage the furniture and walls, and will escape through windows and doors.

Remarkable savings can be recorded with subatmospheric heating system.

Water Supply

A good water supply is very important in a

hospital. Offhand one might think every plant should have its own water supply, and save $5,000.00 a year on water bills. Many times however the water on the premises is impure and mixed with chemicals, the result will be leaky pipes, corrosion in boilers, and a good many repair bills which more than offset the saving.

Cooperation of Other Departments of the Hospital

Cooperation of the various departments with the engineer in the hospital should be very important. Whenever new equipment is to be purchased and installed, additions and improvements to be made, it is important that the engineer should be one of the first to know about it.

When planning a new hospital or an addition to an old one, the architect and consulting engineer should by all means cooperate with the engineer in the plant. As a rule, too much attention is given to the selection of fancy hardware, elaborate color scheme and fancy architecture with ornamental fixtures, overhanging doorways and balconies, which are a menace to life and property in times of an earthquake or fire. Many times the mechanical equipment which costs about one-third of the building is only a detail on the drawing, and any old corner is good enough for that necessary evil—the power plant. Pipe lines, valves, and traps should be more easily accessible, run in shafts where repairs can be made without annoying the patients. Practical professional engineers consider the importance of such details.

Cooperating between the doctors and the engineers could solve many fracture problems, some appliances and splints can be built more practical and less expensive in the hospital shop. There are too many complicated gadgets and special features connected with most of the hospital equipment. Time and money could be saved if there were more standardizing and if repairs could be made locally instead of sending the parts to be repaired to the factory.

More cooperation from the nurses would eliminate many of the unnecessary help calls which take so much of the engineer's time. In the average 100-bed hospital there are about 600 pieces of fixed equipment like pumps, motors, sterilizers etc. and over 2000 valves, faucets, traps etc. which some time or other need attention. It is no wonder that many of our hospital engineers have a nervous breakdown.

Cooperation between the engineers of the various hospitals would bring out many valuable ideas for the improvement of hospital equipment.

The Good Engineer As an Asset to the Hospital

An efficient, reliable, and steady engineer is a valuable asset in the management of the hospital plant. As a rule he finds his work interesting, involving as it does problems on steam heating, air-conditioning, laundry, and building maintenance. He is continuously planning how to improve the efficiency in the plant without serious shut downs, and uninterrupted service, he is generally one step ahead of trouble and does not wait for things to happen. The other type of engineer, however, lets things drift along, he continuously worries the management about all the ills and defects in the plant,—everything is wrong. Instead of doing things himself he rather gets some outsider and lets him take the blame.

One more problem is how to secure better skilled craftsmen. The younger generation seems to be too restless to buckle down and learn a trade thoroughly. We are facing a crisis unless employer and employee get together and set up rigid standards for apprenticeship training which would not only bring about better skilled workers, but would cut down unemployment.

A Legal Question

The defendant is sued on a charitable subscription to promote the general activities of a hospital. Is the promise supported by consideration?

Answer: Yes. The continued operation of the hospital in reliance upon the pledge furnished the consideration for the promise to pay and created a promissory estoppel, *I. & I. Holding Corp. v. Gainsburg*, 251 *App. Div.* 550, 296 *N. Y. Supp.* 752 (1937). Charitable pledges have been generally enforced where there have been acts of reliance on the part of the promisee. 1. *Williston, Contracts S* 116 (1936). Such enforcement has generally been explained in terms of a theory that combines the elements of estoppel and of consideration. *Trustees of Baker U. v. Clelland*, 86 *F.* (2*d*) 14 (*C. C. A. 8th*, 1936); *First Savings Bank v. Coe College*, 8 *Cal. App.* (2*d*) 195, 47 *P.* (2*d*) 481 (1935); *Trustees of U. of Pa. v. Coxe's Ex'rs*, 277 *Pa.* 512, 121 *Atl.* 314 (1923).

From 15 N. Y. U. L. Qu. Rev. 129, Nov., 1937.

Feeding of Hospital Employees

MARION G. DANA, M.A., New Haven, Connecticut

FOOD, like the weather, is a good conversational subject, and something in which the layman is certain he could make marked improvement.

We, in food work, have become convinced that we cannot please all the people all the time, and we do not lose heart if we get scant words of appreciation.

A hospital provides food and shelter for those needing medical and nursing care. To do this, it requires equipment and a large personnel ready for service at all times. Its success is due largely to a contented, well nourished group of employees. A nurse with a headache because she has not had an adequate breakfast, or a doctor unable to get lunch because he was assisting in a long series of operations which carried him past the lunch period, may not care for the patient in the way the hospital would like to be represented.

Diversified Groups Among Hospital Employees

This group of employees, which we are considering here, is composed of people of widely different intellectual and cultural backgrounds—doctors, nurses, orderlies, waitresses, etc. This, of itself, presents problems. And it is further complicated in that it is a self-contained group—a small community living together and eating together with few of its members having friendships in the city outside. Many are working under a peculiar strain with life and death itself at stake. There is a tenseness sometimes difficult for the service departments to reckon with; little things loom large when talked over in this closely knit group. The dietary department especially has to take this into account.

Most hospital employees are hired with salary plus maintenance. Oh! that charmed word—maintenance—what does it mean? Does it specify room, food, laundry of uniforms? What kind of room? What kind of food? Does it include all steaks and chops, any left-overs, unlimited portions, meals for guests whenever they appear, sandwiches for private jaunts? These points should be specified when persons are employed, and then these standards maintained religiously. Human nature is such that favors granted to one are almost always sources of grievance to the rest of the group.

If I had my say, food at least, would not be a part of maintenance. All employees would be paid in cash. Rates should be high enough to enable them either to buy their food in the community outside or in the hospital itself at prices which would amply cover cost of production and yet be within the means of the employees.

There are arguments for both methods. The employee will feel an independence when he can go out into the open market and buy wherever he wishes. As a rule, communities adjacent to hospitals do not have facilities to care for any such large group. A longer lunch hour, too, is necessary. Another fact is that the hospital has little assurance as to quality of food served and sanitation of preparation.

Benefits of Good Food Service for the Employees

When the hospital assumes the responsibility for preparation and serving of food offered, it has control of quality purchased, its preparation, and service. The hospital can also do a bit of educational work by allocating expense in such a way that nutritious inexpensive foods carry less of the overhead than the luxuries on the bill of fare. Under such a system, the hospital would still have its employees eating in the building, because they could obtain cheaper and better meals than on the outside. They would be far better satisfied than under the system where food is a part of salary, simply because it would be their *choice* if they ate in. The hospital aims to furnish an adequate diet to its employees in order to have a contented group, physically in good shape so that they may give expert and efficient care to its patients. When employees are out sick, it costs money. Some one, perhaps less efficient, has to be hired to do the work, or if they have to be hospitalized, there is the additional expense of medical care and hospitalization. Therefore it is very important that

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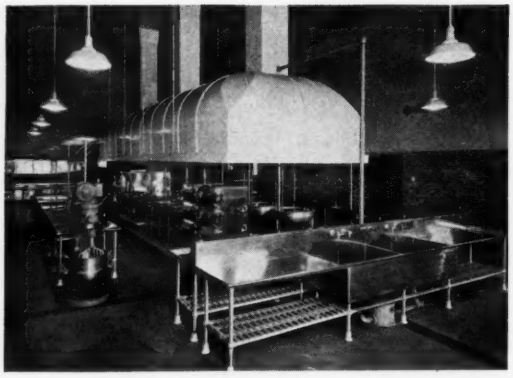
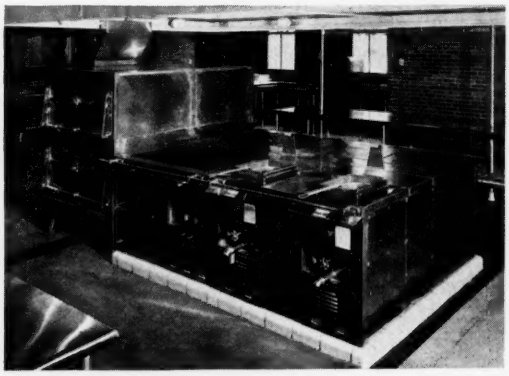
Presented at the New England Hospital Association convention, Boston, March 11, 1938.

HOSPITAL KITCHENS

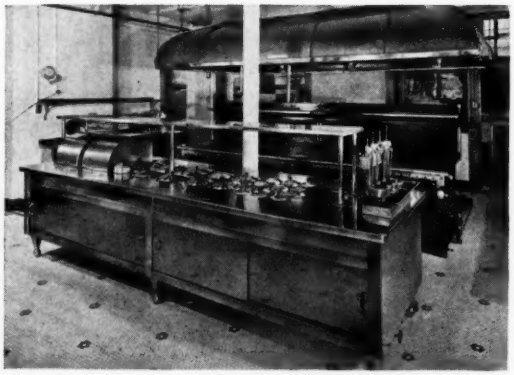
Ideal Arrangements and Equipment



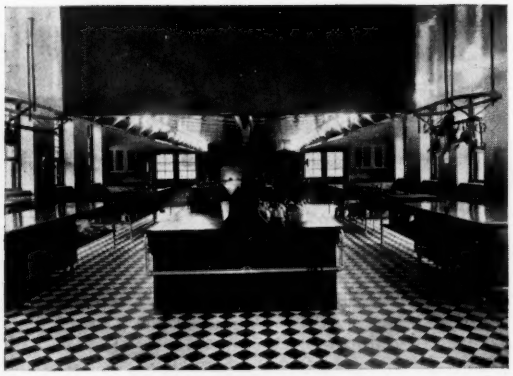


Electric Ranges and Other Equipment
Homer G. Phillips Hospital, St. Louis, Missouri

Good Samaritan Hospital, Dayton, Ohio



Holy Cross Hospital, Salt Lake City, Utah



Seton Hospital (Nazareth Branch), New York

considerable space, equipment, and money should be expended to keep this group in prime condition.

Dietary Set-up at the New Haven Hospital

At New Haven Hospital we have the following set-up: a staff dining-room for doctors, a nurses' dining-room and an employees' self-service cafeteria caring for both men and women employees, such as orderlies, waitresses, etc. No provision is made for the clerical or secretarial groups except in a few instances.

We are fortunate that the dietary department has been assigned quarters at the top of the house, fifth and sixth floors. This has a very decided advantage in that patients are not annoyed by troublesome odors, and also that people have no advance knowledge of the food being served before coming to the dining-room.

I have very strong opinions about the publishing of menus, posted or otherwise. The element of surprise has a great deal to do with good digestion. Of course, it is possible that the main dish is not popular, but the chances are something served will be relished. Whereas, if one knew what was being served, he might be prepared to dislike it anyway or perhaps even not come to lunch.

Specific Suggestions That Are Helpful

I have listed a few specific suggestions which may be helpful in obtaining a more contented group of employees.

Dark and dingy dining-rooms react surprisingly upon the appetite of the tired worker, whether he is doctor, orderly, or nurse. Dining-rooms should be light, airy, and attractive. Why should we not provide comfortable chairs, curtains at windows, good ventilation, adequate lighting, electric, if daylight is not possible? China should be suitable and attractive. Heavy plain white crockery has no place in an attractive service. Dishwashers with live steam connections should be provided. Buy good quality table appointments, and guard them closely from loss and breakage. It is surprising how things walk away to other departments or into the refuse. Have the garbage and papers combed for silver.

Fallacy of Buying Cheap Grades of Food

Use the best grades of food obtainable. There is no economy in buying cheap grades. Have nothing to do with them if you want a low food cost or a happy family. More is lost or wasted by purchasing "bargains," so-called, which do not hold up on inspection. The old saying, " a woman can throw more out with a teaspoon than a man can bring in with a shovel" is equally true of the hospital kitchen. Care in preparation and serving more than counterbalance any savings made by sharp bargains.

It is not my purpose to discredit careful purchasing. There is every reason why we should take every advantage of the market on quality goods, to purchase just what we need and no more. Bear in mind that we are dealing largely with perishable goods, many of which show shrinkage even with generous refrigeration.

When to Buy Foods

Buy when supplies of good quality are lowest. For example, at New Haven we plan to do little Saturday buying of perishables as the market is higher that day. Have a flexible menu. When the price of spinach is low, use spinach. When the price of raspberries is low, use raspberries as such and also make into jam for later use. Utilize your refrigerators as an aid to purchasing. This is more easily done with employees' meals than with patients and will enable you to give greater variety to the menu with no greater and possibly less per capita cost.

As I have previously mentioned, at New Haven we operate three different dining-rooms for personnel. Doctors and nurses are served the same menu with dinner at night. Employees have supper as the evening meal. Little choice is given in either case but unlimited bread, butter, and milk are served in all cases.

Only one quality of food is purchased by the hospital. Different cuts are, of course, purchased for specific uses. Steaks and chops for example are served doctors and nurses about twice a month. These are not served to employees. The pork chops, hams, round steaks, bacon, and so forth are identical, cooked in the same kitchen, with the same method of preparation and by the same cooks using standard pans and dishers to secure uniform portions.

Planning the Menus

In planning menus, we try to take into account:

1 Money available and market quotations. In this group we feature the more moderately priced foods with the more expensive sprinkled in to produce variety. As a rule, we try to strike the balance in one day, rather than to have days of feast and days of famine.

2 Equipment available and hand labor involved. With one central kitchen which is the most economical layout as concerns money in-

vested, utilization of supplies, labor and supervision, care has to be taken to "cut the garment according to the cloth." Do not plan all oven foods, croquettes for every one, or use spinach which has to be washed in many waters on all menus. Avoid too heavy a load on the bake shop or too much last minute preparation. See that all equipment and workers are busy but not any overloaded.

3 Food preferences of different groups as shown by close inspection of plate waste. Naturally corned beef and cabbage would be more appealing to the hard laboring laundryman than to the tired operating room nurses. But beef stew made from bottom round of steer beef with plenty of fresh vegetables could be served on any menu.

Making the Mealtime an Interesting Interlude

Some of the devices which may be employed to make meal-time a more interesting interlude without marked increase of expense are:

1 Have no set of menus which you rotate. There is one exception. Fish is quite generally served Fridays because of the religious preferences of so many. Consequently the supply in markets is usually better for that day. Keep away from deadly monotony of the same foods the same day of the week.

2. Use bake shop items freely. Hot breads coming out at intervals during the meal are much enjoyed. Pie is always a prime favorite. Bulk ice cream can be easily produced and should be used often. Use different flavors and types of sauces. The money spent for a good baker will bring big dividends in satisfaction of the employees. If bakeshop goods are served fresh, very inexpensive recipes will prove quite acceptable. They will not, however, hold over well.

3 Serve fresh fruits and vegetables as often as you can afford them. Salads, especially the mixed green and fruit varieties, are favorites. There is less waste if served in a salad bowl with dressing, where each may help himself to what he desires.

4 Work hard for variety on menus. Welcome suggestions from whatever source. Try serving something different even if not an accredited dinner dish. The group will probably be afraid to try it the first time it is served but will be less skittish the next time it appears on the menu.

I have never worked with a committee on menus, but I can imagine it would be difficult if one was on a limited food budget.

5 Do not serve many creamed dishes. Get your milk in the diet in some other manner.

6. Serve individual portions. The day of platter service in institutions is gone. It is slow, the person serving may not dish evenly or possibly no one serves at all, each helps himself. Have suitable dishes and serve attractively.

Make as many individually formed dishes, croquettes or pastry shells for example, as you can manage with the hand workers available.

7 Keep food coming in relays. Do not cook all at the beginning of the meal. It is a good idea to have different components ready and combine in definite proportions as needed,—creamed chicken for example.

Do not cook in too large amounts. Recipes for about 100 is a good rule. Over that number, the manipulation of the cooking process and the weight of materials tend to produce a mushy consistency and turns out a poorer product. Also cooking in relays means fewer left-overs to worry about. These really should be few and should be carefully sorted, aired, and cooled before being put into refrigerators. In utilizing left-overs, discard all questionable material. It is poor economy to serve a pan of creamed chicken and run the risk of a good siege of food poisoning and what is more serious, lose the confidence of the employees as to the quality of food served them.

8 Never serve the same menu on wards that is served in nurses' dining room. If a nurse has had a disagreeable experience with serving a food, she is not going to eat it for her own luncheon. Christmas and Thanksgiving dinners are exceptions. Then the same menu is served throughout the house.

9 Celebrate different occasions with different menus or different form of service. This is appreciated at Christmas. We do quite a bit for employees Christmas Eve, carols by the waitresses, perhaps a Santa with a present in his pack for every one, dessert served in the corridor to all employees and to friends of patients who may appear during the supper hour. Things of this sort do much to keep the nurse or doctor from feeling abused because he is working long hard hours apart from family celebrations.

St. Patrick's or St. Valentine's days are good excuses for other celebrations.

All this is an extra for the dietary department, but I really think most of our workers appreciate this break in the monotony.

Making the Food Service Attractive

There are many advocates of cafeteria service, but we feel that it is quite essential that the meal-time be a period of rest and relaxation for the busy nurse or doctor. Something should be

done about the rush at meal-time. Every one is in such a hurry. Nurses in particular, want their whole meal served all at once. Waitresses are rushed, give poor service, and a messy, unattractive table results. I am much in favor of serving in relays, closing the dining-room and resetting tables before allowing others in. It would give a more restful attractive meal for the nurse and be infinitely easier for those serving.

These are a few suggestions which may be helpful in keeping a contented family. It is only as these employees, the doctor, the nurse, the orderly, etc. are well nourished and happy that the patient is going to receive that care and treatment which you hospital superintendents are anxious to provide. In working towards this goal, the dietary departments are anxious to do their bit.

Hospital Budgets

There is nothing mystical or inherently difficult in budgeting hospital income and expense. A familiarity with the simpler rudiments of accounting, and good judgment, based on experience in hospital operation, provide all the technical skill required. Records of past financial performance of the hospital are the materials from which the budget is best constructed. The more detailed these records are the more detailed it will be possible to make the budget, but the more detailed the budget the more complicated will be the use of the budget as a current control on expense and income.

In general terms, the budget should take a form similar to the classification of accounts in use by the accounting system in the hospital, though as a practical matter it is possible and advisable at the start, at least, to simplify it by using only the major accounting classifications.

In the formulation of the budget it is very unsafe for any but the most expert to attempt to make estimates on theoretical grounds—on a basis of what any given item ought to cost or how much income any given activity should earn.

A simpler and sounder method is to simply take the income and expense for the past year divided up into such classifications as are used in the accounting system and use these as a base. These amounts can then be adjusted up or down accordingly as the executive's judgment leads him to believe they will be changed during the ensuing year. If fuel prices seem to be increasing adjust this item upward an amount which seems to cover the probable increase. If methods of fuel saving have been introduced adjust the amount downward as much as can be reasonably expected. If x-ray income is increasing or decreasing, adjust this earning up or down in a similar manner. When all the major items have been thus adjusted a comparison of expected income and expense can be made. If the disparity between the two figures is too great, it is unsafe to simply revise them to "force a balance." Both income and expense have an inexorable way of working their own sweet will. The budget figure should not be altered until it is possible to find some concrete method by which the conditions responsible for the particular item may be so altered as to create a reasonable hope that the promised change can be effectuated. It is futile to hide your head in the sand, and much less disturbing to wrestle in the budget-making stage than to adopt an impossible budget and be entirely discredited by inability to adhere to it.

Once the budget is made, living within it becomes the next problem—glibly referred to as budgetary control.

The simpler method is to simply take the annual figure for expense for each class of account, divide the total figure by twelve, and set it up as a hypothetical credit for the month. During the month charge each expenditure against this credit and the balance remaining will, of course, show the financial status as of that date. As the months pass there may be a saving over the expected expenditure in which case this surplus can be added to the balance available for the succeeding month, or if actual expense has exceeded the expected amount, the deficit may be subtracted from the amount available, or it may be pro-rated over all the remaining months of the year.

The procedures for the budgeted income are handled in a comparable manner.

It is always wise to start with the simpler system and elaborate on it only as experience indicates the desirability of greater detail.

A good cost accounting system is a very important corollary of budgetary control. The budget will tell you when you are off course and headed for financial rocks, but it is the cost accounting system which indicates the best manner in which to alter your course and reach the safe haven of financial security—the balanced budget.

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EDITORIALS

A Medical Career and Hospital Administration

More than one-third of the hospitals in this country have physicians as medical directors or superintendents. For the larger part they are hospitals of two hundred beds or over. The salary range for medical administrators is from $5,000 a year and other perquisites to $25,000, with an average of $7,500. The tenure of office averages well.

The field of hospital administration offers to the young medical man who is willing to spend some years in apprentice training, dignified positions at remuneration somewhat better than the incomes of the average physician in active practice, and good prospects of advancement in salary and position as his experience and proficiency increase.

If he is a good administrator, his knowledge of medicine increases his value and efficiency as a medical director; his position becomes more secure, and he remains at the head of his institution until the age of retirement. There is a steadily increasing number of medical superintendents who have directed their hospitals for twenty years or more.

But the compensation goes much farther than the monetary consideration. The medical administrator's contacts with the leaders in his own field, with his colleagues in the medical profession, with people prominent in the social and commercial life of his city add a great deal to the enjoyment of his work, while his intimate knowledge of all that is new in medical and surgical research, in the best application of the latest advances in medical science, keeps him well up with the advanced thought of his profession.

Medical graduates should give serious consideration to hospital administration as a career. They should study its possibilities while they are serving their internships or residencies in the hospital and while they are learning something of hospital administration under actual operating conditions. They will have an advantage over the doctor who engages in the practice of medicine for several years, finding the results disappointing from the standpoint of financial returns, and in other ways, and then decides to enter the field of hospital administration. Few, very few physicians who have tried to enter this field after they have failed in medical practice have secured satisfactory hospital connections as administrators.

Some of our bigger hospitals are offering opportunities to medical graduates, as administrative interns. While the salary is not large it is adequate for a young medical graduate. It may be more than he would receive in other connections. As he progresses in hospital administrative work, he seldom wishes to leave it. In the large majority of instances, the field of hospital administration offers the young graduate a life of activity, a position of security, and a career that is both dignified and professionally useful.

Hospital Service in 1937

The American Medical Association, through the Council of Medical Education and Hospitals, has again rendered a conspicuous service to the medical profession and the hospital field in its survey of hospital service for 1937, published in the current issue (March 26) of the *Journal of the American Medical Association.*

The annual census of hospitals covered by the Council on Medical Education and Hospitals includes 97.6 per cent of all hospitals in the United States and 99.4 per cent of the available bed capacity, and in its approach to a complete hospital service survey it is the most comprehensive report that has been published.

The total number of registered hospitals included in this census is 6,128 against 6,189 in the 1936 survey, a decrease of 61. The total bed capacities however have increased from 1,096,821 in 1936 to 1,124,548 in 1937, a net increase of 27,727 beds. The increase is distributed between general, nervous and mental, tuberculosis, and orthopedic hospitals; all other special hospitals show a decline in the number of available beds, indicating that special departments in general hospitals may be displacing the special hospitals, except the orthopedic institutions.

The census notes that in addition to the number of hospitals registered by the Councils, there are 100 new hospitals, the registration of which is pending, 70 under consideration for registration and 179 under consideration in which construction is still in progress.

General hospitals increased from 4,207 with 402,605 beds in 1936 to 4,245 with 412,091 beds

in 1937. The increase is largely due to the construction of hospitals in rural areas where hospital facilities had not been available.

The occupancy in general hospitals showed a marked increase reaching 70 per cent for 1937 against 67.4 in 1936. Occupancy of 60 per cent or less is shown in some of the southern and western areas, which show a low ratio of hospital beds to population as well. It is significant that the occupancy rates above 75 per cent are shown in the metropolitan and more densely populated areas having a relatively high ratio of available hospital beds to the population.

Mental hospitals show a total of 570,616 beds, an increase of 21,644 over 1936, and overcrowding is still continued. Eighty-six state-owned mental hospitals reported an average patient census of 15 per cent above their rated capacities.

The number of hospitals having their own clinical laboratories increased from 4,384 in 1936 to 4,527 in 1937. Of these 3,592 were under the direction of a pathologist as compared with 3,248 in 1936.

X-ray departments increased from 4,723 in 1936 to 4,894 in 1937. Of this number 4,123 were in charge of radiologists.

The number of births in hospitals show a progressive increase year by year. In 1937 there were 932,912 babies born in our hospitals as compared to 831,500 in 1936, an increase of 101,412 births for the year, the largest increase experienced in any year in history. It is noted that this increase was confined entirely to general hospitals, and that the total of births in special maternity hospitals showed a decline.

Seven hundred thirty-two hospitals are approved for intern training and have 7,223 internships available. However, a relatively large number of interns elect to remain for a longer period than one year, reducing the number of internships available annually to 5,510. The average length of intern service is 15.6 months.

There are 631 residencies available in hospitals approved for resident training, 53 per cent of which are for one year, 253 are for two years, 9 between two and three years duration, and 57 for more than three years.

The total of patient days reached the peak figures of 344,719,140 for the year 1937, an increase of 12,202,284 patient days for the year. The total of patients admitted during the year was 9,221,517, an admission for every 3.4 seconds.

The 4,245 general hospitals admitted 8,349,773 patients or 90.5 per cent of the total. The average stay per patient in general hospitals was 12.6 days.

The 2,693 voluntary hospitals, those operated as non-profit institutions, have a total capacity of 277,717 beds and 38,362 bassinets. They admitted a total of 5,696,156 patients, 61.9 per cent of all patients admitted to all hospitals during 1937. They had a daily census of 193,021 patients, a bed occupancy of just under 70 per cent.

The governmental (tax supported) hospitals admitted 2,509,925 patients during the year, while the non-governmental (voluntary and proprietary) hospitals admitted 6,711,592 patients, or 72.8 per cent of all admissions.

HOSPITALS appreciates the courtesy of Dr. Wm. D. Cutter, Secretary of the Council and Mr. Homer Sanger, in making this census report available for the April issue.

The Responsibility of the Medical History

Who is responsible for the medical history in a voluntary hospital? This question caused an interesting study to be made in a community of about 500,000 persons where there is located one large general hospital and eight voluntary hospitals.

That the doctors were assuming no responsibility and that they would not vouch for the accuracy of the medical histories of their private and semi-private patients in one of these hospitals in this community was discovered by mere accident. An investigation revealed, however, that it was their firm belief that since medical records were made on all cases because of a hospital regulation and that since the interns and residents wrote these records the contents of these records were not their responsibility, even though their signature appeared on the head sheet of these records.

Doctors in the various hospitals in this community were approached, and it was generally agreed among them that their signature on the head sheet of the patients' histories gave approval only for the release of the patients from the hospital and the final diagnosis. All the superintendents of these various hospitals, however, were under the impression that the doctors, in signing these head sheets, had been approving the contents of the histories.

An influential physician was asked what he would do in a medical legal case if the medical history was contradictory to his belief. He replied that he would state that he had not written the history nor had he read the history, and

whether he was a member of the staff or not he would assume no responsibility for it. This, of course, might lead to a very embarrassing situation in a court trial.

It would seem advisable, therefore, for each hospital to make a study of its situation and to check the attitude of its physicians. In order to eliminate any question of doubt as to the responsibility of the contents of a medical history, this point should be discussed at staff meetings.

It would be well to have inserted on the head sheet of the history over the attending physician's signature:

"I vouch or attest that the contents of this medical history is correct."

This is an important matter for hospital superintendents to investigate.

Public Interest and Our Hospitals

When something goes wrong in a hospital it is quite easy to obtain public interest. This is not because people like to discuss unpleasant facts but because they have become attracted by a definite event. Following this line of thought, if pleasant, instead of not so pleasant, events are brought to their attention they will react similarly, with the difference that they will appreciate instead of depreciate the hospital. While no institution for the care of the sick can be considered a place of joy, it can definitely be a place of great interest. But such can only be known to relatively few unless a definite policy of public relationship is created and maintained.

The wise administrator will begin his campaign by educating the complete hospital personnel in the functions of the institution. He will explain to them how each department is a cog in the wheel which leads to the desirable end result—good hospitalization. Through his example and guidance they will learn to talk of the various units of the hospital in a dignified and pleasant manner without undue dramatization. If they are professionally sincere, and they will be, they will naturally infuse their enthusiasm among personnel, patients, visitors, and friends throughout the community.

When keen interest in the institution has been aroused, then through ethical and continued press releases this interest thus created can be kept continually stimulated and reinforced by judicious talks to public bodies given by members of the governing body, the medical staff, and the administrator.

Always remember that the average citizen is inherently proud of things within his community. He may not be particularly interested in statistics and other technical data but he will react most favorably to any feeling of friendliness, courtesy, and progressive efficiency that is radiated from the institution, either by word or action. The method of creating this feeling is relatively unimportant, providing, of course, that it is ethical.

By the ethics of public relationship is meant that we must remember always we are not trying to build up an individual unit to a place of security, but are explaining the need of good hospitalization in community life. One of the vital factors in a patient's recovery is that of confidence. If this confidence is built up not only through local efforts of patient service but by inspiring the whole community into an understanding of the value of the hospital work and thus creating a great body of supporters, who, in times of trouble, will befriend the hospital through a sense of mutuality—such is good public relationship.

Night Service

The night superintendent and her staff are confronted with many problems which make night duty a *bête noire* in some hospitals. Working at night while the world sleeps or relaxes in social activities and without the stimulation of the excitement which surrounds the hospital during the day has an unfavorable psychological effect on the average nurse. The wise administrator will take this fact into consideration and endeavor to keep the night routine normal and pleasant as possible.

The night nurse needs just as cheerful surroundings and attractive, well cooked meals as the day nurse. Economies in nursing service and plant operation should be spread over the twenty-four hours. Too many economies should not be inflicted upon the night workers. With fewer interruptions at night fewer nurses are needed. This calls for more varied duties for each member of the staff which can prove very laborious if not well distributed. A little thought and planning could make assets out of what are now detriments in night nursing.

Hospital administrators together with their school of nursing superintendents could well emulate the custom of the Chinese mandarin, who once a year puts aside his usual daily occupation, visits the tombs of his ancestors, reflects upon their careers and their achievements and endeavors to draw lessons from their experiences.

Retrospection which inspires newer and better ways of doing things is a foundation of progress. If time were taken to study some of the less desirable hospital duties that in many hospitals are accepted as time honored evils to be tolerated, it may be found that just a few changes will bring about more happiness and better efficiency.

History of the Autopsy and Its Relation to the Development of Modern Medicine*

"Mortui Vivos Docent"

E. B. KRUMBHAAR, M.D., Philadelphia

UNWILLINGNESS to open the bodies of the dead has been manifested through many centuries under the most diverse conditions, whether from traditional, religious, or aesthetic motives or from ignorance of the benefits to be obtained therefrom. As will be seen in other sections of this symposium, this tabu has still by no means been overcome in some otherwise civilized countries. Especially in the case of the Greeks and Romans did this inhibition do incalculable damage. When, under the master hand of Hippocrates, medicine emerged from the domain of magic and superstition into the pure light of observation, if it had been granted that observation on the cadaver of the changes produced by disease could have supplemented the masterly observation of signs and symptoms, then the sound basis of medical knowledge would inevitably have been advanced by centuries. Hippocrates, to be sure, recognized the importance of an anatomical basis: "Anatomy is the foundation of medicine . . . every discourse should be based on the form of the human body;" but, according to Ley, he believed that one could learn anatomy from wounds without having to look into corpses, "an unpleasant if not a 'cruel' task." Many of Galen's errors are directly attributable to the unfortunate restriction of his material to animal bodies and the consequent hazardous reasoning by analogy for the human case. Only with the renaissance did autopsies and human dissection become possible; and, largely thereby, medicine became established on a rational basis.

Not that human interiors had not been examined in previous centuries. The Egyptian *tarichеutes* must have seen countless lesions, during centuries of embalming, but lack of concern and differences of social status doubtless prevented them from transmitting such knowledge to the physician-priests. Pliny is quoted by Lobstein as saying that the Pharaohs had the habit of scrutinizing the bodies of the dead and thus recognizing visually the causes of health (valetudinis); but I have not been able to verify this quotation. (Perhaps for "Pharaoh" one should read *Ptolemy*). Between the times of Hippocrates and Galen, Herophilus and Erasistratus apparently did autopsies at Alexandria.† I do not know the reasons for this exception to the general rule, nor why such a valuable method of study was subsequently discarded at a time when Roman civilization was still advancing. Herophilus, the first man who searched into the causes of disease by human dissections (according to Pliny), is known to have made such correlations as rupture of the ligamentum teres with dislocation of the hip; while Erasistratus' celebrated observation of excessive fluid in the abdomen associated with hardness of the liver is practically unique in classical pathology.

Assyrian medicine, though well advanced in some particulars, gives no evidence of human dissection, while opening the body after death was prohibited by religion in India. In Judea, also, a considerable knowledge of disease depended not at all on autopsies, though post mortem examinations are definitely not prohibited by the Jewish religion and never have been. In China, autopsies were practically non-existent before the arrival of occidental medicine. Wong and Wu (History of Chinese Medicine, 2nd ed., National Quarantine Service, Shanghai, 1936) have found five instances in ancient Chinese history where the bodies of the dead were opened to ascertain the cause of death —in all but one at the request of the patient. In no case, however, was the operation performed by a medical man, and the profit was correspondingly small. "Before the twentieth century saw the

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*The literal meaning of the Greek word autopsy is "oneself, I view"; though not precise, it at least has the merit of indicating the advantage of seeing for oneself instead of speculating. The term, though not of great antiquity, is more firmly established than the more accurate and modern "necropsy" (view of the dead) or the non-committal German, "Sektion." It is hardly necessary to add that the autopsy is an examination of the dead body to ascertain those pathological lesions present, as a means of establishing, not only the cause of death but also of learning as much as possible about the total disease history of the subject.

†Max Simon ("Sieben Bücher Anatomie des Galens," Bd. II, Introd.) gives reason for doubting that autopsies were done there in any great numbers.

dawn of a new era, autopsies were of the utmost rarity in China "(Wong and Wu). In 1913, however, Presidential decree established much the same regulations (as regards consent, mysterious deaths, unclaimed bodies) as now exist in this country. Just before this proclamation, an autopsy had been performed at Soochow under circumstances of public formality that suggest those of eighteenth century Europe. In the descriptive pamphlet published for the occasion the autopsy was called the first dissection in China for 4000 years!

The origin of the rivulet that developed into the broad current of nineteenth century pathology based on autopsies is difficult to establish. Morgagni speaks of autopsies performed in Byzantium in the sixth century to investigate the cause of plague, and doubtless other unrecorded post mortem examinations were made in cases of poisoning or other mysterious deaths. Grn (Norsk. mag. Laegev., 95, 1405, 1934) has raised the interesting question as to whether Sigurd Jorsalfar (1090-1130) had one of his men autopsied at Byzantium (*"post etiam quodam defuncto exenterato visu addisceret"*). In thirteenth century England Roger Bacon urged the importance of autopsies in terms that indicated they were at that time by no means unheard of procedures, while another monk, Arnold of Villanova (1235-1312), preached similar doctrines in Spain as incidentals in his natural philosophy. The wise Frederick II ordained that a body should be dissected at Salerno every five years and that only those could practice surgery in his dominions who could furnish documentary evidence that they had studied the anatomy of the human body (Ley). Chiari (at third hand) tells of a physician who performed many autopsies at Cremona during the plague of 1286 (Salimbene of Parma's Chronicle, 1288). William of Saliceto (ca. 1201-1280) performed the first known medico-legal autopsy of the period—on the nephew of the Marchese Pallavicini—while such observations as *"durities in renibus"* with dropsy indicates that this was far from being his only autopsy. The record is still extant of Bartolomeo da Varignana's post mortem investigation in 1302, at the court's order, of the suspicious death of the nobleman, Azzolino. In 1410, Pope Alexander V died suddenly under suspicious circumstances, as so many did in those days, and his body was examined by Pietro d'Argelata, the most distinguished pupil of Guy de Chauliac. These isolated examples which doubtless could be considerably multiplied, show that the autopsy method was slowly gathering momentum during the Middle Ages.

Dissections—both publicly for educational purposes and privately by scientists and artists—were becoming more and more common, and the increasing number of written references to internal structural changes shows that autopsies for the study of disease were practiced with increasing frequency in the fifteenth and sixteenth centuries. Laws were passed permitting the civil authorities to turn over so many bodies annually, or perhaps the bodies of all criminals, to the now well established unversities. Material was scarce, however, and public sentiment often hostile, as is illustrated by Michaelangelo's celebrated sketch of the clandestine dissection and Vesalius' penitential, fatal voyage to the Holy Land. Vesalius' Emperor, Charles V, even felt it necessary to ask his Theological Faculty of Salamanca whether it was permitted to good Christians to dissect human bodies (1556). Fortunately the answer was in the affirmative. Support for post mortem examinations was sometimes found in the highest intellects: Francis Bacon (1561-1626), for instance, wrote of the advantages of autopsies for the important study of pathology (*"De dignitate et augmentis scientiarum,"* 1623); Hektoen (J. Am. Med. Assn., 82, 949, 1926) quotes Harvey (who was frequently concerned with autopsies) to the effect that "more can be learned from the dissection of the body of one dead from a chronic malady like consumption than from the bodies of ten animals."

A landmark of first importance in the history of autopsies is Benivieni's *"De abditis causis morborum"* (1507). Here for the first time was published the results of sustained effort to determine hidden (internal) causes of disease and of symptoms, by the correlation of clinical history and autopsy findings. Fatal cases of syphilis, pyloric carcinoma, acute pericarditis, abscess of the hip, illustrate the kind of disease studied. Benivieni is also said by Farber (Postmortem Examination, 1937) to have been the first to ask consent of the deceased's relatives. This, "the only book on pathology that owes nothing to anyone" (Malgaigne) may be truly regarded as the first of the distinguished publications that led through Bonetus' *Sepulchretum*, the various Spicilegia, Centuries and Observations, and Morgagni's *"de-Sedibus"* to the spacious days of Rokitansky's 30,000 autopsies in Vienna. It is of course impossible even to indicate the individual autopsy observations that gradually but surely extracted medicine from the morasses of ignorant phantasy to the terra firma of solid fact, a progress that was only temporarily impeded by the will-o'-the-wisp of eighteenth century theorizing. Morgagni's contributions alone are too numerous to include here. They were of prime importance not only for their own sake, but also as definitely establishing the concept of the anatomical basis of disease, and so

promoting the autopsy habit that it stood ready to use in the advances of nineteenth century scientific pathology. Turning to individual contributions, Massa's visceral gummata (1537), appendicitis and other lesions in Bk. VI of Fernel's "Universa Medicina," (1554), Colombo's study of calculi (1559), Plater's numerous and varied contributions (1614), many kinds of internal tumors by Tulp (1641) and others, Sylvius' (1650) and Morton's (1689) lesions of tuberculosis, Wepfer's demonstration of the relation of cerebral hemorrhage to apoplexy (1658), Vieussens' cardiac lesions (1705), and Lancisi's aneurysms (1728) —these are but a few instances—picked almost at random—of what medical science owed to the autopsy before the establishment of pathology as a basic medical discipline. The first to group the results of his autopsy studies according to organs, instead of according to leading symptoms like Morgagni and his predecessors, according to Chiari, was Joseph Lieutaud (1703-1780) who in his Historia anatomico-medica (1767) gave the results of some 1,200 autopsies performed by him at Versailles.

Like anatomical dissection, the autopsy had its opponents—a criminal prosecution for body snatching was said to have been made in 1319—but it had able supporters. The Dutchman, Volcher Coiter (1534-1590), believed strongly in the importance of autopsies and successfully imposed on the civil authorities his views of their need in the study of disease. Marcello Donato (fl. XVI cent.), in his *De medicina historia mirabili,* gives to those who obstruct the performance of autopsies a stern warning that is as applicable today as it was 350 years ago (see Renouard). Schenck von Grafenburg (1530-1598), who preserved in his *Observationum* (1597) many previous pathologic observations that would otherwise have been lost, gives numerous quotations to support his views on the value of post mortem observations. The accumulation of pathologic material in such museums as Riva's (1667) at Rome, Ruysch's at Leyden (1701) and the Hunters' (now at Glasgow and the Royal College of Surgery in London) shows from another aspect, how the autopsy was steadily adding to medical knowledge.

The eighteenth century vogue of natural history even in dilettante and court circles had its effect on pathology also. Dissections and autopsies became the "pièces" of social occasions and were performed before august assemblages under the most formal conditions, though absence of refrigeration or preservatives must have made the occasion far from aesthetically pleasant. Rembrandt's "Anatomy Lesson" and the frontispiece of Vesalius' Fabrica give us the milieu of the professional autopsies of the period.

The hey-day of the autopsy's contribution to medicine—the latter half of the nineteenth century—was the result of recognition of its value in teaching students of medicine, of the establishment of pathology as a practical and independent medical discipline, and of the fortunate state of affairs, especially in Germany and Austria, whereby the necessary post mortem examination could be made without the preliminary consent of the nearest relative. It is said that de Haen in Vienna in 1758 was the first to perform autopsies routinely before students, and professorships of pathology began to be created even earlier (Strasburg, 1674; Frankfurt, 1744; Leipzic, 1755; Tubingen, 1767; Parma and Altdorf, 1794; Paris, 1798, etc.). For some time, however, these were always combined with other chairs, did not have the support of pathologic institutes, and were mostly concerned with theoretical presentations. Not until the nineteenth century did the chair become independent (Lobstein, 1819) and combined with the deadhouse for efficient teaching and research. Beginning with Vienna in 1806, chairs, now called chairs of pathologic anatomy, were rapidly established in many countries, cooperation with the hospital deadhouses established, autopsies abounded and medical teaching and progress prospered. It is said that Carl Rokitansky (1804-1878), who spent over 50 years at the Vienna Allgemeines Krankenhaus, performed over 30,000 autopsies himself and had material from over 60,000 available for teaching and study. Small wonder that Rokitansky is recognized, with Morgagni, as the greatest of all gross descriptive pathologists, and that Vienna became for some time the Mecca of world medicine. Among his individual contributions—all directly derived from the autopsy—may be reckoned an autopsy technique and record keeping that still persist, increased knowledge of diseases of the arteries, and of congenital heart disease, of the spondylolisthetic pelvis, intestinal ileus, emphysema, perforating gastric ulcer, renal and other cysts, the establishment of acute yellow atrophy and lardaceous disease, and the differentiation of the latter disease in the kidney from Bright's disease, and of lobar from lobular pneumonia. Through the most adverse vicissitudes, the Allgemeines Krankenhaus has continued even today to offer to students of all lands the most precious opportunities for studying the changes produced by disease and of correlating them not only with the cause of death but with the various signs and symptoms produced during life.

In other countries, also, the autopsy habit was bearing rich fruit, even though the fruit was

picked, more often by the clinician than the professional pathologist. In the early days of the nineteenth century, the great French School, led by Bichat (who is said to have done some 600 autopsies in his short life), Bayle, Corvisart and above all, Laennec, made its immortal contributions to the knowledge of diseases of the heart and lungs by the accurate evaluation of observed clinical data in the light of the post mortem findings. Louis (1787-1872), who devoted his whole life to studies in the wards and autopsy rooms of the great Paris hospitals, depended absolutely on hundreds of autopsies for his statistical studies of phthisis and typhoid fever. For Cruveilhier, the first occupant of the Paris chair of pathological anatomy, autopsies permitted the creation of the greatest atlas of gross pathology that the world has yet seen.

The British were quick to follow the developments in France. The "great men of Guy's," Bright, Addison, and Hodgkin, names familiar to every medical student, leaned heavily on the *sectio cadaveris* for their observations and conclusions. Hodgkin was the only professional pathologist of the three; but the information gained in the deadhouse, then as now, was available to either clinician or pathologist. In fact, it was the custom, and still may be, for the physicians to perform their own autopsies and write their own descriptions, which are said to be still available in the hospital archives. In Ireland the brilliant group of clinicians, Colles, Cheyne, Stokes, Adams, Graves, Corrigan, similarly required post mortem examinations, either directly or indirectly, to establish advances which are too well known to require further description here. The anatomical concept of disease was by now firmly established; never again would it be possible to erect systems or theories of disease that were in contradiction to the evidence furnished by this basic branch of medical science. The autopsy had indeed vindicated itself and established its necessity even before the entrance of pathological histology into the field.

Intimate knowledge of medical conditions in Europe in the second quarter of the nineteenth century, supported by considerable research, would be required to evaluate the various factors that led to the dominance of Austro-German medicine after that period, for some time, largely through the establishment of a frequent and adequate autopsy procedure. However, we may at least indicate certain elements that played a part therein. As we have seen, Morgagni's great work was written in the form of letters to friends in various countries, in each of which the letters seem to have acted as a focus from which the fire of enthusiasm for performing autopsies spread. To be sure, they were done purely to satisfy clinical demands, and without the benefit that should have resulted—no adequate systems of histology and nosology yet existing. Nevertheless the important habit was formed and when the right men came along, the field was ready for the harvest.

Certainly an important place must be reserved for the Allegemeines Krankenhaus (founded 1784) at Vienna, which was one of the earliest places to shift the emphasis of teaching pathology from the lecture room to the autopsy table. Here the far-sighted Peter Frank (1745-1821) had inaugurated a prosectorship in 1796 and a teaching pathological museum, which paved the way for the great Rokitansky (volunteer assistant, 1827; professor, 1844) and his able successors. For all persons dying in hospitals, autopsies became as much a matter of course as the attentions of the undertaker. By 1856 there were over 1,400 performed annually (Wittelshoefer). In ordinary cases the relatives had the right to object but they hardly ever did so. I. Davidsohn (Am. J. Clin. Path., 3, 199, 1933) states that in Austrian public hospitals autopsies are now obligatory by law. In a private house permission has to be obtained to avoid offense against the Hausrecht. Property rights are not involved, as German law does not regard the dead body as the property of the next of kin. To be sure, the autopsy could not be begun for several hours after death, to leave time for a possible protest, but also, and especially in the early days, to make certain that the patient was really dead. In suspicious cases autopsies could be ordered either by the criminal courts or by the sanitary police, and the latter could also order Sektionen from those dying from any newly arrived epidemic, in order to establish its nature.

In Germany, still under the sway of Naturphilosophie and fantastic theories, the establishment of scientific autopsy methods was longer delayed. At the Charité in Berlin the first prosectorship was created in 1831 to be occupied from 1846 to 1849 by the great Virchow. He, however, was forced out by the politics of the 1848 revolution, to become, at Wurzburg, the first Ordinarius in the subject in Germany. It was not until 1856 that Johannes Müller succeeded in having him brought back to the Charité as a Professor Ordinarius and then modern pathology began. From then on practically all patients dying in the hospital were submitted to post mortem examination, which was performed according to a definite procedure‡ by the pathologist from the point of view of eliciting the maximum amount of pathological

‡Space forbids consideration of the development of autopsy technique, on which subject much has been written. Virchow's own technique—now almost a century old and "official" in Prussia for many years—is still in widespread use; Rokitansky's, Ziegler's, Baumgarten's, Beneke's are among the best known, with of course, many variations for special needs.

information, rather than merely to satisfy clinical demands. By 1867 all the German universities possessed full chairs of pathological anatomy with more or less completely equipped Institutes. Though relatives usually have the right to object to the performance of an autopsy within twelve hours (in some states, 24 hours) after death, this right is seldom exercised. In some places hospital regulations require autopsies; if not, as Durck puts it, silence has so long given consent that the right might be now regarded as as an "usuelles Recht." In the rare case that objection is made and the autopsy performed nevertheless, the relative gets no financial profit therefrom. At the Charité in Berlin, autopsies for years have been over ninety per cent of the deaths; and Lynch (J. Am. Med. Assn., 89, 576, 1927) quotes one case of 99.9 per cent autopsies of 1867 deaths, i. e., two were missed! This, to be sure, includes *all* post mortem examinations, as in Germany even the bodies for dissection are included in the autopsy statistics.

In other leading medical countries the autopsy unfortunately did not become as universally accepted as in the German-speaking nations. In those governed by the principles of English law, the body of a patient dying in a hospital, as elsewhere, became the property of the nearest relative whose actual consent had to be obtained, to avoid the possibility of suit for property damage as well as for mental anguish. Autopsies, therefore, did not emerge from the stage of being sought only on special occasions, and thus almost necessarily from an unprepared and, in this respect, uneducated public. The seekers, too, were more apt to be unskilled in the necessary technique and perhaps had to work in the face of indifference or even opposition on the part of senior clinicians who had not profited from autopsies themselves and did not realize the benefit to be gained. Naturally the autopsies performed in English-speaking countries lagged far behind those of central Europe. In fact, it is only in the present century —when as a matter of fact the most important contributions of pathological anatomy have already been made—that autopsy percentages began to rise to considerable figures in the better American hospitals. All credit is due to those who have brought about this improvement in the face of formidable difficulties.

Until the second quarter of the nineteenth century the autopsy had conferred its benefits without the aid of further microscopic study and this in spite of the fact that the microscope had been a potential assistant of value for more than a century and a half. The technical improvements of the microscope (especially the achomatic lens) in the first quarter of the nineteenth century, however, brought about the discovery of the cell theory (1837-1839) of animal structure and the rapid application of this discovery to diseased tissue in the hands of Johannes Müller and his pupils. Particularly to Virchow is due the establishment of Cellular Pathology, "the greatest advance which scientific medicine had made since its beginning," according to Welch. Valuable new observations and concepts multiplied and the science of pathologic anatomy led medical progress.

Again, the autopsy became the source of material that formed the century's chief contribution to medicine. As well as gleaning all possible information from gross examination of the dead tissues, the pathologist now supplemented this with microscopic study of suitably fixed and stained samples of all tissues suspected of disease changes. The mystery of lesions too minute to be studied or even noticed with the naked eye was laid bare, and a new mass of facts about disease quickly became available, the end of which has by no means yet been reached. Virchow himself elucidated the mechanism of thrombosis, embolism and pyemia, introduced such concepts as agenesia and heterotopia, discovered leukemia, established the various pathologic degenerations and illuminated many other fields of pathology. Chiefly in the hands of his colleagues and pupils, the multiform lesions of neoplasms were classified and evaluated, the nature of inflammation, that other most important disease process, was elucidated and countless other valuable observations recorded.

Differential stains permitted the micro-chemical recognition of fibrin, amyloid, and the like and the degenerated myelin sheath, while such fundamental concepts as hypertrophy from overuse and fibrous tissue replacement clarified medical thought. With the advent of bacteriology, and the more recent biochemical study of body fluids, the autopsy again made its contribution by furnishing the material on which these studies could be made.

Today in every civilized country every respectable hospital, and therefore every respectable medical school that must have hospital affiliations, has facilities for making autopsies and sections of autopsies and for keeping their records. It has been truly said that the percentage of autopsies in a given hospital is a good measuring stick of the efficiency of that hospital. Restricted budgets, to be sure, may prevent ideal "work-ups" through lack of technical assistance, material, etc.; but it would be hard to find a pathologist "worth his salt" who does not regret these conditions and who could not improve the hospital's efficiency if they were remedied.

An important phase in the history of the autopsy is that of the medico-legal post mortem examination. It, however, need be treated but briefly here in its historical aspects, as it will also be considered in another chapter. One can easily picture how the immediate practical importance of autopsies in suspicious deaths led to its early development before the people were ready for autopsies or dissections purely in the interests of science. Doubtless many of these examinations were mere explorations of the depth and extent of a wound—the partial autopsy of today—but at least the method of satisfying a need was developing.

We have already seen how some of our earliest autopsy records have to do with the governmental need of establishing the cause of death under suspicious circumstances. In England (and therefore later in this country) this task came to be part of the duties of the Coroner or Crowner, the ancient Coronarius or Coronator. This office, the origin of which has been placed as far back as Alfred the Great, but which certainly was in existence before Edward I's reign, had then a much wider scope than now. As *Custos placitorum Coronae*, the coroner had the important duty of generally protecting the Crown's privileges against the Sheriff of the County. In cases of suspicious deaths, it was as necessary for him to see that the Crown's rights to material property were maintained as to establish the cause of an obscure or suspicious death. While his duties are now restricted to the latter function, for which he can direct a post mortem examination, in England he still must call an inquest in cases of treasure trove, and in some places hold inquests in cases of loss by fire. The need for such duties has long since been outgrown and even the steps toward exposing the criminal are now better taken care of by more adequate police machinery. Only the pathological function remains, which logically should be covered by an independent medical officer.

In this country, custom in general follows England, though it varies considerably in different states. In many, unfortunately, the office has long been one of the minor political footballs, wherein the important features, the coroner's autopsies, are necessarily relegated to physicians appointed by a politician who may change with each change of administration. The evils of such a system have been so increasingly recognized, that in some states the coroner has been replaced by a medical examiner, a physician trained in medico-legal pathology whose duty it is to investigate supposedly violent deaths and to assign to the proper judicial authorities the duty of holding inquests when deemed necessary. Usually a Civil Service life appointee, the medical examiner is not subject to the flurries and pressure of small politics. This change was first accomplished in Massachusetts in 1877—where the coroner's office at that time was in especially bad repute—and is now in satisfactory operation in almost all the New England States. New York followed suit in 1915, and it is probably only a question of time before the improvement is generally adopted in this country.

In non-English speaking countries, an office such as the coroner's does not exist and present procedures for investigating suspicious deaths have a relatively modern origin. In China, to be sure, a similar office was in existence since the time of Shun Yu (1241-1253) of the Sung dynasty (H. A. Giles, Proc. Roy. Soc. Med., 17, 59, 1923-24). In the "Hsi Yuan Lu" ("Record of the Washing Away of Wrongs") detailed directions were given to the responsible officer, as to how the dead body should be examined. In its 37 chapters sections will be found, to be sure, instructing in such fancies as detecting a relative as the murderer from the way his blood sinks into the victim's bone; on the other hand, good information may be found as to the significance of various wounds, time of death and so on.

In France, since 1289 the Provost of Paris has had the duty of naming a physician to view the corpse in any case that concerned the authorities. Since early in the nineteenth century, viewing the corpse has been obligatory, but by a physician only if violence is suspected. An Austrian decree of 1796 appointed a "Totenbeschauer" for every community to act where the physician in attendance had not stated the cause of death. In Holland, Belgium and Italy this duty is performed by a civilian physician, in Denmark by a police physician and, according to Zinn (Deut. Viert. Jahrsch. f. off. Ges., 7, 465, 1875), was not provided for in Russia, Turkey and Spain as late as 1875. In Germany, official regulations for legal autopsies began to appear from 1720-1769 (Strassman, Lehrb. d. gericht. Med., Stuttgart, 1895). An important landmark was the air-in-lung test for stillbirths, which was introduced about 1682 by Schreyer of Zeitz. The first official regulation requiring the opening of all the body cavities (as opposed to mere inspection or haphazard incisions) was promulgated by Wurtemberg in 1686. Obligatory inspection of the corpse and performance of an adequate autopsy when indicated made gradual headway in nineteenth century Germany, until by 1875 precise directions for the official performance of legal autopsies were in general use. These are, or at least until recently were, mostly based on the Prussian regulations for 1922, the text of which can be found in some of the larger works on Sektionstechnik.

In central Europe, the legal autopsy is one of

the chief supports of the medico-legal institute, which has reached much greater development abroad than in this country. Such autopsies are usually performed before the institutes' students and furnish the pathological material for the medico-legal museum.

In America, the history of the autopsy follows the same course—though somewhat belated—as in the older lands. Historic examples of the earliest known autopsies on the Western Continent are the often quoted San Domingo monster (1533) and the scurvy cases in Champlain's sailors. In the former case, described by Oviedo, of a double female monster, the chief aim was theological—to determine whether one or two souls had perished. The scurvy autopsies were for the strictly medical purpose of investigating the cause of the disease. In Champlain's expeditions, both at St. Croix and later at Port Royal, as a result as we now know of unbalanced rations, many fell sick and died of what was then known as "mal de la terre." (Champlain's Voyages II, Chap. 6, 40-54, Prince Society, Boston XII). Autopsies on several—the first on the North American continent (1605)—though establishing the purpura; swollen spleens, and mortified lungs, failed to reveal any useful clues, as did the later autopsies by des Champs at Port Royal. In colonial times, there were few who were equipped for or interested in performing post mortem examinations. Steiner (Johns Hopkins Hosp. Bull., 14, 201, 1903) and Packard (Hist. of Med. in the United States, 2nd ed.) refer to a small number of recorded seventeenth century autopsies, performed for various reasons, while Johannes Kerfbyle's autopsy on Governor Slaughter of New York (1690) stands out as an early medico-legal autopsy to investigate the possibility of poisoning. Thomas Cadwalader's case of osteomalacia shows that, occasionally at least, autopsies were performed as a means of advancing medical science. When they were performed, records were not necessarily kept, so that a true picture is hard to come by, though early American medical journals show that opportunities were often made use of. To take one city as illustrative: in Philadelphia, the Pennsylvania Hospital has museum specimens and records that show that autopsies were performed throughout its existence. A heart, for instance, deposited by Philip Syng Physic over a century ago, still shows its gumma of the septum while the clinical record notes a pulse of 36. At the Philadelphia General Hospital the official autopsy records go back to 1866 (Curatorship of William Pepper). The autopsy percentages and number performed there annually have risen steadily, so that the pathological laboratory now has records of over 35,000 autopsies, mostly with clinical abstracts, gross and microscopic descriptions and diagnoses, and cross indexed according to lesions found. It would be hard to overestimate the value every year of such a service to the hundreds of medical students who attend these autopsies, to the 30 or more pathologists who perform them and utilize the records in their investigations and to the hundred or more clinicians, more than half of whose fatal cases are checked up in this way. The same picture, on a smaller scale, could be drawn of the other good hospitals of the city, in some of which the pathologist and his staff, thanks mostly to the advantage given by the autopsy, act as a scientific clearing house for all sorts of problems that arise to perplex the physician.

It is of course obvious that many more studies can be accomplished today than formerly on secretions of the living body, which by the invention of ingenious instruments is being forced to expose more and more of its secret places to the inquiring scientist; but the more extensive opportunity for repetition of such bacteriological and chemical studies on the dead body, checked by the ever fundamental need for establishing the morphologic condition of the tissues, continues to reserve a position of crucial importance here also for the autopsy. Nor is it proper to regard an autopsy as a static procedure that gives information only about an end result. Properly interpreted, it can throw light on many incidents in the course of the disease as well, explaining past as well as present disorders and associated lesions as well as the actual cause of death. Though it may now have made its chief direct contribution to medical progress, it is difficult to visualize a time when the autopsy will cease to be important both in teaching medical students of all grades and ages about the changes produced by disease, and in furnishing the basic measuring rod by which other advances—whether of etiology, nosology, diagnosis, prognosis, or treatment—are evaluated.

Dr. H. B. Howard, in his presidential address in 1910, at the Twelfth Convention of the American Hospital Association in St. Louis, said of the hospital superintendent: "He should be a living example to the whole personnel of the hospital of a man who uses calm judgment and never prejudice. He should make you think of the man who is 'greater than he that taketh a city.'"

Three Years of Accidents in a Public Home

MAXWELL LEWIS, Welfare Island, New York

THE possibility of accidents which might occur to 1780 individuals, whose ages range from approximately 50 to 90 years, and 90 per cent of whom are chronically ill, is of great concern to an administrator. The New York City Home for Dependents is one of the institutions in the Department of Hospitals, located on Welfare Island.

Seventy per cent of the guests are ambulant, twelve per cent crippled, five per cent senile, and thirteen per cent blind. The male blind are housed in a separate building of two floors with a capacity of 125 beds. Similarly, the female blind and senile are housed in a building by themselves. (The blind on the lower floor, the senile on the upper floor.) Two other buildings, for male crippled, comprise the out-wards, for the care of semi-ambulant and wheelchair cases. Then there is a large male dormitory building with a capacity of 625 beds, and a female dormitory building with a capacity of 540 beds. These buildings were constructed originally in 1846 and long since have outlived their usefulness as proper housing places for the care and welfare of those occupying them. In addition, the buildings cover approximately 20 acres of ground with automobile roads, broken walks and lawns due to new construction now in progress augmenting the possibility of accidents.

ACCIDENT REPORT

Date.....
Ward.....
Name.....
Age.....
Time Reported to Nurse.....
Time Reported to Doctor.....
Time Seen by Doctor.....
Amb.; Semi-ambulant; Wheelchair; Bed Pt.
Mentality, Defective or not.....
Lack of Attendance.....
Witnessed by Staff.....
Nature of Accident.....
Treatment..... Dr.....
Diagnosis..... Dr.....
Prognosis..... Dr.....
Remarks.....
.....
Recommendation to Avoid Similar Accident.
.....
Charge Nurse.

The Author

● **Maxwell Lewis is Superintendent of the Home for Dependents, Welfare Island, New York.**

It becomes, therefore, quite important to know to what extent active efforts to prevent or diminish accidents have been accomplished. All accidents of any nature, major or minor, important or trivial, those needing medical or nursing attention, or those not needing any attention, are reported to the superintendent each morning at nine. For the purpose of reporting each accident to the superintendent, a form containing all the necessary information is used.

Therefore, this study of accidents, which covers the years 1935, 1936 and 1937, is quite nearly a report of all accidents in the City Home during this period.

Our first survey in 1935 recorded 432 accidents to the guests of the Home. The study of all the factors and contributing causes surrounding these accidents led to definite efforts tending toward a possible curtailment.

First, we gave a definite assignment to the assistant superintendent to make daily and regular rounds, visiting each building, ward, and all the grounds, with the express purpose of seeking out accident hazards and checking on personnel and equipment.

Second, we rearranged the duties of attendants and orderlies to cover more frequently those places where accidents occurred.

Third, we reclassified the guests as to type of care needed and placed them in appropriate wards.

Fourth, we made definite assignments of maintenance personnel to remedy immediately accident hazards.

Fifth, we inaugurated a series of lectures to personnel at regular meetings on safety and safeguards.

Sixth, we held contests among employees and awarded prizes to those pointing out the greatest number of accident hazards.

Seventh, we formed a grievance committee to act on all quarrels among guests and to dispose of disagreements among them.

We continued our survey of accidents during 1936 and as a result of our efforts we experienced a marked reduction in the number of accidents from 432 in 1935 to 303 in 1936. Again, a study of the survey revealed that with a continuance of efforts similar to those expended by the staff in 1936, we might continue our progress in reducing accidents. The results in 1937 showed once more a reduction from 303 accidents in 1936, to 272 in 1937.

The average daily census in 1935 was 1635, in 1936 it was 1645 and in 1937 it was 1742. The total accidents in 1935 were 432; in 1936, there were 303 accidents; and in 1937, 272; showing respectively a decrease between 1935 and 1936 of 30 per cent, and between 1936 and 1937 a decrease of another 10 per cent.

The total days' treatment in 1935 was 547,430; in 1936 it was 602,675; and in 1937, it was 636,020; making the incidence of accidents to days' treatment in 1935, 1 to 1383; in 1936, 1 to 1989; and in 1937, 1 to 2099. In 1935 there was a trifle more than one accident per day. In 1936 and in 1937, it was reduced to less than one accident a day.

The main causes of accidents are due to: falls; burns; quarrels; occupation, and miscellaneous. In 1935, 82 per cent of the accidents were due to falls; in 1936, 68 per cent; and in 1937, 67 per cent were thus accounted for. The second main cause, accidents due to burns,—1 per cent in 1935; 3 per cent in 1936; 1 per cent in 1937. In the third cause, accidents due to quarreling, in 1935 this condition accounted for 4 per cent; it indicated 6 per cent in 1936; but in 1937, 17 per cent. The increase of accidents due to quarreling is so marked as to prompt a closer analysis of the causes. Close scrutiny reveals that quarrels were on the increase in the male dormitories and in the male semi-ambulant building. The increased population in 1937 over 1936 made it necessary for us to crowd the guests of the Home in the wards and on the porches ordinarily used for sitting and smoking purposes. Second, we experienced an unusual turnover in our attendant personnel. The type of person who applied for attendant positions knew little or nothing of how to handle old people, lacked proper sympathy, and quite often we were inadequately manned. The old people, unfortunately, became irascible at lack of attention and crowded conditions. Quarrels followed.

In the semi-ambulant ward accidents from quarreling increased from one in 1936 to fourteen in 1937. This building, two floors in height, is divided into four wards (two on each floor) of thirty beds each. During the tour of duty from seven in the morning until four in the afternoon one orderly and one attendant are in charge of sixty guests. From four in the afternoon until seven the next morning, there are two more shifts but only one attendant and one orderly are on duty on each shift—i. e., one orderly and one attendant to care for one hundred and twenty semi-ambulant old people, all who have to be fed and many who have to be bathed and dressed. Here, again, we must point to the cause as lack of proper attention due to insufficient personnel.

During the year 1937, we made further efforts to overcome quarreling because of lack of attention. In the first place, we formed, in October of 1937, a council of delegates from each ward of the Home to meet once a month and to bring grievances and recommendations for improvements to the superintendent.

We requested, also, in our budget for 1938, additional personnel for those buildings where the increased accidents were so marked. Our requests have been granted.

The fourth main cause, occupational accidents, show that in 1935, 3 per cent were due to such mishaps; in 1936, 6 per cent; but in 1937, 2 per cent. The last and miscellaneous cause shows that in 1935 it was 5 per cent; in 1936, 9 per cent; and in 1937, 9 per cent.

It is significant that the odd accidents of 1935 were not repeated once in 1936, and that in 1937, we found also an entirely new crop of accidents, which in only two cases were repeated in the former years of 1935 and 1936. In 1935, some of these accidents were due to catching foot in chair, laceration of nose from falling ceiling, bitten by a cat, cut lip with razor, etc. In 1936, we find miscellaneous accidents due to striking leg on edge of step, bumping into ladder, catching finger in bed spring, hitting hand with hammer, etc. In 1937, we find falling against radiator, struck by an automobile, etc., as comprising some of the miscellaneous accidents.

In 1935, 1936, and 1937, 5 per cent were major accidents necessitating transfer of patient to hospital.

Looking back, then over the statistics just given we see the greatest reduction in the first group—in accidents due to such hazards which an active

campaign on the part of those responsible for the care of these people can remove and control. We believe that our efforts and work with our personnel, our assignments of checking on hazards, our classes, our rearrangement of duties of personnel, our uncovering new hazards have been fruitful of good results accounting, first, for the total reduction in 1936, of 30 per cent of accidents as compared with 1935, and an additional reduction of 10 per cent in accidents in 1937 as compared with 1936, and second, in the reduction of accidents which are contributable to faulty care on the part of personnel.

However, on the other hand, we witnessed increased percentages in types of accidents due to the carelessness or actions of the individuals themselves, which are difficult to control in an institution as large as the City Home, and where the type, character, disposition, and temperament of the old people are so varied. But yet these comparative figures point a way to a campaign which we have started—a campaign of educating the individual to exercise more care and to be watchful himself for accidents of his own making.

Noteworthy is the trend of accidents among the men as compared with the women. In 1935, 71 per cent of the accidents happened to women; in 1936 it was reduced to 50.5 per cent, and in 1937 to 37.5 per cent.

The group between sixty and eighty continue to show the highest percentage of accidents while there has been a very decided drop in the number of accidents occurring to individuals with impaired mentality; the latter type shows a reduction as follows: 43 per cent in 1935; 43 per cent in 1936; 18 per cent in 1937.

Accidents inside the buildings continue to be in the majority—the statistics indicate that 76 per cent in 1935, 86 per cent in 1936, and 82 per cent in 1937, were thus accounted for. Likewise, the hours from 7 a. m. to 7 p. m. show the greatest number of accidents although there has been a marked increase in the percentage of accidents before 7 a. m. In 1935, there were 16 per cent; in 1936, 20 per cent; and in 1937, 29 per cent accidents before 7 a. m.

During 1935, the high month for accidents was May; in 1936 it was April; while in 1937 it was July.

An interesting figure bearing upon efforts to curtail accidents, and which is in a great measure the reason for individual mishaps, is borne out by the following facts: 72 per cent of our population live in the large dormitories, 28 per cent are housed in separate buildings. The 28 per cent make up the crippled, blind, and senile, those who have to be clothed, bathed, washed, fed, and constantly cared for. As indicated previously, there were 432 accidents in 1935. Of these 432 accidents, 44 per cent happened to 72 per cent of the population, but 56 per cent happened to the other 28 per cent. In 1936, of the 303 accidents, 54 per cent occurred to the 72 per cent of the population and 46 per cent to the 28 per cent of the population. In 1937, of the 272 accidents, 61 per cent occurred to 72 per cent of the population and 39 per cent to the 28 per cent of the population. We were thus able to reduce the percentages of accidents among those who need almost constant custodial and a good deal of nursing care.

To us who are in charge of the institution, the figures indicate clearly that additional personnel is needed not only in these special wards to take care of the blind, the crippled, and the senile, but also to be watchful in those places where the ambulatory guests congregate.

A complete and detailed study of the accidents during 1935, 1936, and 1937, follows:

Comparative Study of Accidents

This survey represents a comparative study of the accidents which occurred in the City Home during the years 1935 (432 accidents), 1936 (303 accidents) and 1937 (272 accidents).

	1935	1936	1937
	38—	45—	29—
I *Falls from bed*	9%	15%	11%
Weakness	18	10	1
Restless during sleep	10	8	1
Intoxicated	1	..	5
Epileptic	9	16	1
Dizzy	..	5	4
Reaching for something	..	5	2
New mattress in bed	..	1	..
Slipped off side of bed	..	..	15
	35—	22—	20—
II *Falls from Chairs, Wheelchairs*	8%	7%	7%
Restlessness	3	2	1
Leaving, getting into chair	2	..	13
Faulty chairs	3	..	..
Epileptics	2	3	2
Pushed from chair by another guest	1	..	1
Asleep, fell from chair	2	..	1
Sudden weakness, unsteady	17	4	..
Misjudging distance	5	..	1
Dizzy	..	4	..
Reaching for something	..	8	1
Insulin shocks	..	1	..

	1935	1936	1937
	245—	116—	102—
III *Falls While Walking*	57%	38%	39%
Sudden weakness, dizziness	69	20	28
Epilepsy	22	8	4
Awkwardness, infirm	81	20	25
Cripples	40	..	10
Intoxicated	..	..	5
Blind	11	10	3
On steps	10	12	15
Ice	7	8	5
Protruding floor nails	1	9	..
Tripped over obstacles, etc	1	..	2
Senile	..	20	..
Crutch caught in sidewalk	..	..	1
Fell on sidewalk	1	..	..
Fell in bathroom	1	..	..
Fell near bed on way to bathroom	1	..	..
Fell down steps of basement	..	2	..
Fell over shoelaces	..	1	1
Fell on wire in yard	..	2	..
Fell on floor of dayroom	..	4	..
Fell against radiator	..	..	2
Fell over pail in dining room	..	..	1

	26—	18—	26—
IV *Falls in toilet*	5%	6%	9½%
Cripples	2	5	5
Wet floors	1	3	1
Epileptics	2	4	2
Blind	1	3	5
Weakness	14	3	2
Awkwardness	6	..	10
Fell in bathtub	..	..	1

			1—less
	11—	6—	than
V *Falls from Commodes or Chambers*	3%	2%	½%

	4—less		
	than	8—	3—
VI *Injury from Slamming Doors*	1%	3%	1%

	3—less		
	than	9—	3—
VII *Burns from Hot Fluids, Matches, Iodines*	1%	3%	1%

	19—	18—	48—
VIII *Injuries Obtained When Quarreling with Each Other*	4%	6%	17%
Struck over head by guest	1	2	4
Struck with shoe by guest	1	2	1
Struck on cheek by guest	1	..	3
Struck by guest	2	8	9
Scratched by guest	2	..	1
Pushed by guest	2	3	3
Quarreling, kicked by guest	1	..	..
Quarreling, threw hot tea	1	..	..
Struck with cane	1	1	3
Struck with corset	1	..	..
Struck by guest after argument	7	..	19
Struck on foot with chair	..	1	..
Struck by brick and stone	..	1	..
Collided with guest during argument	..	..	1
Bitten by guest on finger	..	..	3
Beaten by guest, bruises on body	..	..	1

	1935	1936	1937
	11—	19—	7—
IX *Occupational Accidents*	3%	6%	2%
Grasping a hot pot in kitchen	1	..	..
Burns from coffee urn in kitchen	1	..	..
Sratched neck while working on ring of pipe	1	..	..
Cut thumb while cutting corn	1	..	..
Abrasion of thumb from broken plate	2	..	..
Scratched left thumb while making bed	1	..	..
Second degree burn lifting hot pot	1	..	..
Picked up a hot pan	1	..	..
Struck abdomen with broom while sweeping	1	..	..
Spilled hot coffee on hand while pouring	1	..	..
Struck edge of table	..	3	..
Laceration of thumb while working in kitchen	..	1	..
Wrist caught in locker, hand caught in lock	..	3	..
Struck hand on locker while cleaning	..	2	..
Slipped while wheeling barrow	..	1	..
Struck hand with hammer while repairing shoe	..	2	..
Struck hand, brushed skin off	..	1	..
Injuries unknown	..	5	..
Food truck ran over foot	..	..	1
Fell off table while working	..	..	1
Laceration of thumb	..	..	1
Struck by food truck	..	..	1
Struck by guest accidentally with tray	..	..	1
Ice fell on foot	..	..	1
Struck hand with hammer	..	1	..
Cut hand with knife	..	..	1

	17—	25—	20—
X *Miscellaneous Accidents*	5%	9%	9%
Hit head against locker	2	..	..
Fell when picking up cane	1	..	..
Caught foot in chair	1	..	..
Struck head while asleep	1	..	..
Cut finger on broken cup	2	..	..
Abrasion of finger from nail	1	..	..
Can opener slipped, cut finger	1	..	..
Dropped chamber on foot	1	..	..
Laceration of nose from falling ceiling	1	..	..
Dirt in eye from ceiling	1	..	..
Bitten by cat	1	..	1
Abrasion of left leg against radiator	1	..	..
Stepped on pin	1	..	..
Cut lip with razor	2	..	..
Struck leg on edge of step	..	5	..
Struck ladder, ribs bruised	..	2	..
Lighted pipe in pocket	..	3	..
Finger and hand caught in bed spring	..	4	..
Bumped hand on radiator	..	5	..
Returned from pass, head wound	..	1	..
Fell down subway steps, out on pass	..	2	..
Struck hand on fence and post	..	3	..
Struck face against locker	..	..	2
Pushed against door by guest	..	..	2
Struck hand in bed springs	..	..	2

	1935	1936	1937
Collided against guest, ribs fractured	..	..	1
Pushed hand through window	..	..	1
Slipped on orange peel	..	..	1
Cut corn with razor	..	..	1
Struck by bus	..	..	1
Burned in Physio-Therapy	..	..	1
Stepped off platform in Dayroom	..	..	1
Found on grounds intoxicated, bruised	..	..	1
Suicidal attempt, throat cut (male)	..	..	1
Suicidal attempt, fingers cut (female)	..	..	1
Bumped nose on locker	..	..	1
Bumped cheek on locker	..	..	1
Bumped head on radiator	..	..	1
XI *Referred to Hospital Because of Accident*	23—5%	17—5%	13—5%
Comminuted fracture femur	1	..	..
Colles fracture—left wrist	1	..	..
Fracture right femur—right wrist	1	..	..
Concussion	1	..	..
Fracture of neck left femur	1	4	..
Fracture of neck right femur	1	..	..
Fracture of clavicle	1	2	1
Fracture of right hip	1	..	..
Possible fracture—right leg	1	..	..
Possible dislocation—right knee	1	..	..
Possible concussion	1	..	..
Possible fracture—right shoulder	1	..	..
Possible fracture—left hip	2	..	..
Possible fracture—wrist	1	1	1
Possible fracture—right hip	2	..	..
Possible right humerus	2	..	..
Possible right femur	3	..	..
Possible radius	1	..	..
Observation	..	1	..
Shocked from insulin	..	1	..
Stretched cartilage of knee	..	1	..
Cerebral hemorrhage	..	1	..
Possible fracture right humerus	..	1	..
Abrasion right shoulder	..	1	..
Possible rupture of viscus	..	1	..
Possible fracture of 11th and 12th ribs	..	1	..
Erosion left eyebrow	..	1	..
Possible fracture of neck of femur	..	..	5
Possible fracture of 4th and 5th ribs	..	..	1
Fracture of skull, cerebral hemorrhage	..	..	1
Wounds in neck, self-inflicted	..	..	1
Dislocation of neck of femur	..	..	1
Dislocation of left shoulder	..	..	1
Possible fracture of humerus	..	..	1

XII *Type of Guests to Whom Accidents Occurred*

	1935		1936		1937	
	No.	P. C.	No.	P. C.	No.	P. C.
Bed guests	2	1	8	3	1	½
Wheelchair guests	14	3	14	5	8	3
Ambulant	337	78	168	55	163	59
Semi-ambulant	79	18	113	37	100	37½
	432	100	303	100	272	100

	1935		1936		1937	
	No.	P. C.	No.	P. C.	No.	P. C.
Males	126	29	150	49½	160	58
Females	306	71	153	50½	112	42
	432	100	303	100	272	100
Impaired mentality	186	43	130	43	48	18
Guests with mental faculties	246	57	173	57	224	82
	432	100	303	100	272	100
Guests under 40 years	...		5	2	2	1
Guests between 40 and 50	23	5	8	3	13	5
Guests between 50 and 60	86	20	40	13	40	14½
Guests between 60 and 70	166	38	103	34	80	29
Guests between 70 and 80	123	28	96	32	80	29
Guests between 80 and 90	31	8	46	14	45	17
Guests between 90 and —	3	1	5	2	14	4½
	432	100	303	100	272	100

XIII *Accidents Occurred*

Inside wards, utility rooms, toilets, kitchens	170	39	176	57	180	66
Dining rooms, sitting rooms, porches, halls	160	37	83	29	42	16
On grounds	102	24	44	14	50	18
	432	100	303	100	272	100

XIV *Accidents Witnessed by Guests or Staff*

	223	52	164	54	133	49

XV *Time of Accidents*

Before 7 a. m.	70	16	62	20	80	29
7 a. m. to 7 p. m.	330	76	150	50	102	38
After 7 p. m.	32	8	91	30	90	33
	432	100	303	100	272	100

XVI *Accidents by Month*

January	32	8	26	9	26	10
February	41	9	27	9	26	10
March	33	8	21	7	27	10
April	40	9	40	13	23	9
May	58	13	36	12	17	6
June	43	10	20	6	14	5
July	23	5	24	8	32	11
August	24	6	12	4	16	6
September	43	10	12	4	20	7
October	38	8	22	7	16	6
November	27	6	33	11	28	10
December	30	8	30	10	27	10
	432	100	303	100	272	100

Comparison of Accidents in Male and Female Wards

	Male Dormitory			*Female Dormitory*			*Wards I & J, Male, Blind*			*Wards K-1 & K-2, Male, Crippled*			*Wards L-1 & L-2, Female, Blind*			*Ward M*, Male, Crippled*			*Total*		
	'35	'36	'37	'35	'36	'37	'35	'36	'37	'35	'36	'37	'35	'36	'37	'35	'36	'37	'35	'36	'37
Falls from bed.....	8	14	1	4	8	7	2	2	0	1	16	7	13	6	9	10	2	5	38—	48	29
Falls from chair...	1	4	1	4	3	4	0	1	0	2	5	10	14	11	4	14	0	1	35	24	20
Falls while walking	70	31	27	62	32	27	9	0	1	28	12	14	28	33	18	48	5	11	245	113	98
Falls in toilet.....	6	1	6	6	8	4	1	0	0	6	5	8	7	3	6	0	2	2	26	19	26
Falls from commode	0	0	0	0	2	1	0	0	0	0	0	0	6	4	0	5	0	0	11	6	1
Burns	1	5	1	0	1	1	2	0	1	0	2	0	0	1	0	0	0	0	3	9	3
Quarreling	8	10	19	4	2	5	1	1	2	3	3	4	2	4	2	1	1	14	19	21	46
Occupational	4	8	5	4	6	0	0	0	0	2	3	0	0	1	0	1	0	0	11	18	5
Miscellaneous	12	15	13	2	8	5	1	0	1	4	5	2	2	8	7	0	1	1	21	37	29
Epileptic	11	1	4	6	5	5	0	0	3	4	1	3	2	1	0	0	0	0	23	8	15
Total 121	89	77	92	75	59	16	4	8	50	52	48	74	72	46	79	11	34	432	302	272	
Referred to hospital	3	8	5	5	4	1	0	0	0	3	1	3	6	2	2	6	2	2	23	17	13

*Occupied by Female in 1935, but by Male in 1936 and 1937.

A Memorial That Will Endure

Philanthropy expresses itself in a variety of ways. Denver, Colorado, presents an interesting case.

The Honorable Robert W. Speer was for many years a well-loved mayor of the city of Denver. During his lifetime he accomplished a great deal for Denver and more particularly for the less fortunate among its population. He had made many close friends, among them a Serbo-American, Vaso L. Chucovich. In appreciation of Mr. Speer's services to Denver and as a testimonial to a lifelong friendship, Mr. Chucovich on his death devised $100,000 and left instructions to the trustees of his estate that this sum should be used to build a monument or a memorial to Mr. Speer.

The trustees of the estate considered many ways of carrying out Mr. Chucovich's wishes. They felt that erecting a monument of marble would not be the best plan. Recalling Mr. Speer's interest in the unfortunates of life and particularly in sick and crippled children, the trustees finally decided that the best memorial they could build to him would be a children's unit to the Denver General Hospital. They submitted their plans to the attorneys for the estate who assured them that the use of the funds for this purpose would be perfectly legal, and they have asked the courts to permit them to use this gift of $100,000 for this purpose.

No more fitting remembrance, and no more lasting memorial to Mr. Speer can be built than a children's unit at the Denver Hospital. It will mean a saving of the lives of many hundreds of children, and the assurance that when the children of Denver become ill or injured, there will be a fine hospital in which they can be given every care and attention.

Fire Hazards

Despite the replacement of the older free burning materials used in construction by the use of the modern fire resistive materials, the oil and gasoline risks, the electrical hazards, the pyroxyline plastic risk and the introduction of scores of new solvents for all sorts of purposes have introduced an entirely new set of hazards for which it has been necessary to introduce entirely new fire fighting methods.

Water will probably always be the most common fire extinguishing agent both on account of its abundance and on account of its means of application.

But there are certain types of fires which water will not only not extinguish but which are greatly intensified and increased by its use.

To meet this unusual demand, four new types of extinguishing materials have been developed: (1) The liquid vaporizing extinguisher is especially useful for fires in automobiles, motor trucks, and adapted to use on fires in oils, greases, and electrical machinery. (2) The chemical solution type is best adapted to fire in free-burning materials such as wood, textiles, rubbish, etc. (3) The foam extinguisher is recommended for fires in free burning materials, including oils and greases. (4) The inert gas type of extinguisher is recommended for fires in electrical machinery, automobiles, motorboats, and for oil and grease fires.

Duties and Training of Ward Helpers

RUTH POLLOCK, R.N., Worcester, Massachusetts

THE introduction of ward helpers to the hospital organization should prove beneficial as well as economical. Studies have proved that fifty-five per cent of the work being done in the hospitals by nurses is non-professional in character, but professional salaries must be paid. Trained nurses should do professional tasks under professional conditions for professional recompenses. The ward helper relieves the trained nurse of the burden of routine duties, thereby reducing operating costs. They offer a valuable service to the patient as an employee of any hospital.

A New Vocation

Depending upon the situation, ward helpers may also be classified as nurses' aids, nurses' attendants, or subsidiary workers. Their work offers a new vocation or occupation for educated and intelligent women without any technical training. It supplies to them an immediate livelihood without any long drawn out period of preparation. This work should appeal particularly to young women doing part-time extension studying evenings, as it furnishes them with money, and yet does not require outside work or keen concentration while on duty. It is also a method of occupying time to good advantage while deciding which course to follow in life. The helpers may prove themselves adept enough to want to train for nurses. It could almost be compared with the trial period now being used in many schools of nursing for testing adaptability, with the added attraction being that they are reimbursed for the services offered.

In situations where a large group of student nurses are rotated through departments, employment of ward helpers lends a certain amount of stability to the department. In hospitals where a strict salary budget system is organized, it allows the nurse to be fully paid for services that can only be given by technically trained people.

Distribution of Ward Helpers in the Hospital

The L. N. O. N. E. recommends distribution of these employees in the following manner. Orderlies are employed to fulfill the ratio of II.

I On a women's ward of 36 patients
Day—Two ward helpers
Night—One ward helper

II On a men's ward of 36 patients
Night—None
Day—One ward helper

Small hospitals would find it good economy to abandon their training schools and employ only graduate nurses and ward helpers, thus raising the standards of the nursing profession by cutting to a minimum graduating classes of those hospitals whose organized budget system does not allow the best of teachers and affiliations. For the hospital, there would thus be a saving through the reduction of operating costs.

Selecting the Ward Helper

By appointment, each prospect has an interview with the superintendent of nurses or some authority designated for the duty of employing them. Preference is given to those possessing the best qualifications. They should be at least eighteen years of age, high school graduates, and in good physical health. Those proving themselves good workers after a trial period are placed permanently on the list of hospital employees as ward helpers.

Salaries and Perquisites

These ward helpers receive thirty to forty dollars a month with full maintenance and laundry. Single rooms and meals with the nurses in the dining room are enjoyed. They are given free hospitalization when ill. A designated type of uniform is usually worn after acceptance. Vacation of fourteen days annually with pay is recommended. If the personnel do not live in the hospital, attention must be paid to rest rooms, locker rooms, and toilet facilities in well lighted, well ventilated rooms. A few comfortable chairs and couches should be provided to insure a happy and satisfied employee.

Duties Assigned Ward Helpers

The duties of ward helpers differ in each situation. Some claim that their services should stop at the bedside of the patient. Others feel that

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their field of usefulness is unnecessarily restricted by such regulations. The latter allowed the helper to do nursing procedures that do not require knowledge of the underlying principles or any clinical judgment. When properly trained, observant individuals become conscious of the grave responsibility of being allowed to assist the nurse. Therefore, if properly trained, duties which are nursing and yet not clinical in character certainly cannot be called out of their field if properly supervised. I have seen this method used successfully in the Memorial Hospital, Morristown, New Jersey. However, if facilities for close supervision are not provided, it is safest to restrict their duties to non-professional ones.

The non-professional duties which can be learned and carried out by any helper are the following:

1 Attending to flowers
2 Delivering mail
3 Running errands, such as bringing supplies
4 Attending to empty beds and beds of ambulatory patients
5 Walking with patients in halls or wheeling them in chairs
6 Assisting the head-nurse in making inventory
7 Accompanying the patients to the office on being discharged
8 Keeping the diet kitchen in order
9 Keeping the refrigerator in order
10 Preparing food trays for the patients
11 Carrying food trays to the patients
12 Feeding patients
13 Collecting food trays and scraping for maids
14 Passing all water and drinks by specific orders from the nurse in charge
15 Keeping the utility room picked up
16 Assorting and passing linen to each patient
17 Caring for bedside tables
18 Passing wash water and tooth brush mugs to patients
19 Assisting patients to x-ray and other departments
20 Cleaning and returning surgical supplies used

Ward helpers should be restricted contact with those patients having any form of infectious disease. Their duties should be limited to those patients who are mildly ill or convalescing. Treatments of any kind should never be administered by nurses' assistants. The latter group of believers do allow them to do the following duties in addition to those mentioned. They are:

1 Giving baths
2 Caring for anesthesia patients under supervision
3 Rubbing backs
4 Taking temperatures, but not pulses and respirations
5 Giving cleansing soap suds enemas

Training the Ward Helper

The ward helper enters into the life of the hospital organization so closely that plans must be made for them very minutely. Many become haphazard workers because of lack of organization and supervision. To avoid any catastrophe, it should be emphasized that while they are all employees they are not professional workers. Often they are not prepared to assume their duties and must be carefully taught and then supervised. Some one person should be responsible for this. Two methods may be used. One is a group of classes conducted along with their work at a convenient hour and then follow-up teaching by the head nurse of the ward. The other is teaching by the head nurse in charge. Of the two, I believe the first is preferable. No diplomas or certificates should be awarded.

The classes may consist of conferences, lectures, or group discussions on the following subjects in general:

1 Hospital etiquette
2 Personal appearance
3 Care of oxygen tents
4 Care of flowers
5 How to clean a bed after discharge of papient
6 How to make a closed bed
7 How to strip a bed
8 How to open a bed
9 How to make an anesthesia bed
10 Place of ward helper in the nursing organization, her relation to the patient and to the nurse and other members of the hospital organization
11 General appearance and condition of the ward at all times
12 Correct temperature of ward
13 Ventilation
14 Care of patients' possessions
15 Listing and checking clothes

Enemas, temperatures, methods of giving baths require class instruction, practice, and supervision when allowed. Definite assignments should be posted daily by the head nurse and follow-up check-ups done for constructive criticism to be offered.

The Increasing Employment of Ward Helpers

Ward helpers are increasing in numbers and fast becoming a permanent factor in hospitals. Plans must be made for correct teaching and supervision. They should be made conscious of their limitations, to avoid them when going into practical nursing on the outside. Suggestions have been made at the league meetings that they, like all who work for pay, should be defined by law, and state registration and state licenses should be compulsory. In 1935 licensing was provided for subsidiary workers in ten states. The directors of the American Nurses Association feel that no formal courses should be provided unless provision is made for the control of them. Therefore no formal courses should be given unless the state controls them or the problem of the ward helper may become a menace to the patient, the hospital executive, the physician, and the public. Many hospitals have used ward helpers for several years. Supervisors and patients have spoken highly of them. Most head nurses, and I for one, feel they are a great asset if correctly taught and supervised.

Soap

No one has made a greater contribution to health than did the aborigine who discovered that when he boiled goat tallow with the leachings from hard wood ashes he secured the cleaning material we now know as soap. The aborigine used a hollowed out block of wood for a kettle and boiled the mixture by putting in hot stones.

The soap maker now uses kettles of as much as 300,000 pounds capacity, steam coils for heating, a myriad of fats, each designed to meet a special need, and salts out the impurities, but it is still the saponification of a fat by heating with an alkali that remains the basic process in soap making.

The modern soap maker uses a large variety of fats, both animal and vegetable, and saponifies with a caustic alkali, either soda or potash. Whatever fat he chooses to employ, it must be purified, bleached, or deodorized—or all three—before use if the quality of the resultant soap is to be high. The different fats affect the character of the resultant soap in two major ways, the titer, or temperature at which the soap will begin to suds and the temperature at which it will break down, and the effect it will have on the material to which the soap is applied—the skin, for instance. The choice of alkali to be used is determined by price, and the physical consistency desired in the finished product. Potash costs two to three times as much as soda but the soda soaps are of the "hard" type—bar, chip, and powder—while the use of potash results in a "soft" soap, paste or liquid, depending upon the amount of water contained.

In the manufacture of sodium soap the fat and alkali are boiled together until saponification of the fat is complete. While still hot, salt or brine is added, causing the excess alkali, impurities, and by-products such as glycerine, to settle to the bottom in a solution known as the "pickle," the soap rising to the top. The "pickle" is then drawn off and the soap is again boiled with brine—a process known as "graining" and again the "pickle" is drawn off. The remaining soap separates in two layers—the purer, known as "settled soap," above, and the "nigre," containing more impurities, at the bottom. The upper layer of settled soap is then drawn off still hot and converted into flakes.

In flake form perfumes or colors as desired are added, and the entire mass kneaded, forced out through dies in solid form and stamped into cakes or bars as desired. Chips and powders are obtained by spraying, grinding, or flaking from the finished soap.

The finished product contains about ninety-two per cent of pure soap in powdered form, not to exceed eighty-eight per cent in chip form and less in the bar or cake forms. The amount in the powdered or chip form is fairly constant—except when deliberately adulterated, as neither the powder or the flake will retain its form if the water content is excessive.

Potash soap does not respond to the salting out process, and therefore it rarely contains more than fifty-five per cent of pure soap.

Since the labor element in the cost of manufacture is small the price is governed by the cost of the raw materials and the value of the principal by-product, glycerine.

Due to the increasing cost of domestic fats, both animal and vegetable, extensive research has been made to discover new sources of fats. Several hundred vegetable oil producing fruits and nuts have been found and tested, but as yet none are available in sufficient quantity to justify their use on a commercial basis.

Hospital Maintenance Supervision

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IN USING the term "maintenance," we mean operation of the physical plant providing facilities for all the diversified services of the hospital. Buildings, including fixed equipment necessary for the special functions of each individual department, constitute our field of activity. Adequate supplies of water, heat, steam, light, and power, acquired and delivered wherever and whenever they are needed, come within the responsibility of maintenance. For purposes of this discussion we clearly exclude another division of administration, sometimes overlapping, known to many of us as "housekeeping," defined as domestic care. This often includes, in addition to general cleaning, laundry operation, the provision and repair of linen, and the handling of other sundry non-medical furnishings and supplies.

Having defined the range of this administrative division, we might first set up standards of measure for clarifying questions of expediency and controlling expenditure, for most of us must secure maximum results within closely guarded financial limitations and be ready to prove any outlay justifiable. What part of every expense dollar should go into maintenance; which, as we have defined it, is complete operation of the physical plant? Obviously the largest possible proportion of a year's expenditure should go directly into the care of patients, for which purpose the institution was founded; services and essentials in wards and laboratories and clinics, the really vital part of the enterprise. Our buildings and equipment are necessary tools, but every cent we can save in maintaining them enlarges the proportion of the dollar available for effective hospital care, which we all realize is growing costlier with the onward advance of medicine and surgery. We must keep a sense of reasonable proportion. I doubt if we should go much beyond 12 cents out of each expense dollar for maintenance, and an analysis of many hospital statements reveals this proportion to be quite generally adequate. Variation depends often upon whether power is generated or purchased. This cost within the twelve per cent often has been carried as low as five per cent of the total hospital operating cost. We are assuming maintenance cost as limited to direct expense of the department itself in payroll and purchases and not including any burden of overhead. Maintenance purchases ought to include disbursements to public utilities for water, gas, and electricity.

Presented at the New England Hospital Association convention, Boston, March 12, 1938.

The Author

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Many of us have to maintain old buildings wherein the ravages of depreciation and obsolescence seem nearly to overtake us while we are compelled to provide the up-to-date facilities demanded in this day. Especially perplexing are problems of repair or replacement, meaning operating cost or capital charges. We are not concerned here with the best planning and arrangement for new plants. We are meeting conditions as we find them in existing hospitals, new or old, large or small; but more particularly what we have to say will apply to the older ones of what we might term average size or larger.

Tests for Maintenance Expenditures

It is suggested that three main questions be uppermost in mind to be answered before accepting any expenditure for maintenance, especially mechanical equipment.

1 Efficiency—Will it do the job?
2 Reliability—Will it go on without interruption in service?
3 Economy—Is repair cost, immediate or deferred, justifiable; or would replacement really be cheaper?

Illustrations for analysis under such questions are innumerable. If we answer the first question of efficiency, after carefully studying needs, we forestall trouble. A pump or a motor will be large enough and not disappoint us in action. On the second question concerning reliability, we will not be over confident in dependence upon any overworked units, and duplication will be provided at strategic points. As to question three on economy, we might be dissuaded from continuing repairs on such vital necessary apparatus as a sterilizer, worn through long use; and, dictated by sound judgment, we will demonstrate the wisdom of saving through a new investment. Sometimes, as we shall show, the hospital engi-

neer can think up ways of overcoming difficulty without spending any money at all.

Organization and Control

The shop is the first place to consider organization and control. Orderly arrangement of machines and tools, suitable storage space for materials and minimum of inventory can be passed without much comment. As to the control of labor, a competent accountant can work out a time card which will serve as the individual worker's daily record, distributing time between various departments and in the shop; and finally form the basis of an adequate cost system for periodic comparisons. The barometer of efficiency from such a simple system will be the amount of unproductive shop time as indicating slackness of work requirements. All maintenance accounting should of course show the division between payroll and purchases, so that labor and supplies may be readily analyzed.

Building Maintenance

Maintenance needs in building structures are usually obvious. A necessary painting job can hardly escape general supervision, outside or inside. Abnormal conditions of floors, walls, and ceilings make themselves known quickly. I have the definite impression that large outside painting jobs or involved structural changes in the buildings can be done cheaper and probably better by outside contractors bidding in competition on clear specifications, when compared to the results of work by hospital employees. We should be organized to care for continuous inside painting and ordinary repairs, which obviously must be a function of maintenance. If we have regularly employed men enough for a big job it is at once plain that we are overstaffed. Depreciation in a building which escapes observation is in the roof. A properly constructed new tar and gravel roof should stand up for at least ten years, and sometimes they are guaranteed for twenty; but eventually repairs are to be expected. The life of tin roofs is greatly prolonged if they are painted at least every three years. The sort of material used in metal roofs of a generation ago has been found intact today, but these roofs have had frequent painting. When copper is used for exposed surfaces or flashings it should be lead coated in localities subject to fumes from oil burning which causes deterioration. Very little is added to the cost.

Have you been surprised to find a northeast rainstorm driving through a perfectly good-looking brick wall as though it were a sieve and ruining plastered walls inside? While brick itself is more or less porous, most of such leakage probably comes through the joints. The tendency a few years ago to increase the use of cement in mortar caused a good many shrinking joints, and a return to conservative lime mortar has given us brick walls like they used to build, and you do not find them leaking. Repointing with waterproof mortar is sometimes the courageous thing to do in instances of this trouble, and such a method might well be considered before general application of one of the many water-proofing materials persistently offered as cure-alls.

No presentation of building upkeep should leave out mentioning a serious contingency. The country is becoming "termite conscious" and there is no doubt as to the insidious destruction performed by crafty insects with devastating results upon supporting wooden timbers. Although not so prevalent now in our section of the country we must be on the watch for signs of this termite invasion, and call upon experts at the first symptoms. Beware of quacks in this field, for scientific methods of treatment and control are accepted by competent authorities.

Water System

Looking into other concealed elements in our plants, we come to water supply. Recognizing that pipes corrode over a long period of years, we may be concerned in old plants with possible interruption of water flow into the hospital. If the piping is very old an additional supply line from the street may look good some winter morning when the ground is frozen several feet deep. Rust in pipe lines has been forced out by a metal ball, practicable from 2 in. to 6 in. in diameter, driven through the clogged pipe under pressure. This method, if successful, may defer for a time costly replacement and restore normal flowage. Another inexpensive preventive in water pressure systems is to give the corroded interior of a steel tank, after a thorough wire brush cleaning, a cement coating applied like paint with a brush. This suggestion has extended the life of such tanks for years. The laundry demands very hot water and so does dishwashing—200° F. at the heater is not too hot. Washrooms, scrub-up sinks, and ordinary domestic uses of water should have it cooler, to avoid scalding, 150° F. at the heater being ample. Two heating units make a fine arrangement for separate supplies, although it is well to have piping adaptable so that they can be interchanged in an emergency. Stand-by service on all hot water requirements is to be mentioned as another advantage.

Electric Service System

In the transmission of electricity old wiring offers real hazards to safety. An inspection of cables, particularly as concentrated around switchboards, sometimes reveals the need of separating lines and treating surfaces with asbestos tape and a chemical coating so as to reinforce insulation. Control of wasted lighting current is always difficult, but care in limiting wattage of lamps where feasible has saved money. Clean bulbs and reflectors afford surprising increase in light. The reliability of lighting in hospitals has often been emphasized. Gas engine generator sets and storage battery systems are positive and reliable sources of emergency current, if a hospital's electricity comes from the public utility company. Even lighting companies themselves are reminding hospitals of the necessity for auxiliary service.

Power House

Control of steam from the power house is a large subject. Whatever form of fuel is used, a daily log is essential which can be summarized and subjected to periodic comparisons of fuel consumption. Maximum and minimum outside daily temperatures will show whether excessive fuel consumption is justified, assuming the same plant load. CO_2 recorders and draft regulators make certain that fuel consumed is giving maximum performance. Fortunate are engineers who have steam flow meters so as to know the burden thrown back on the power house from individual buildings or divisions; and especially the laundry, our largest absorber of steam. Automatic coal stoking is effecting marked economies not only in main heating plants but in smaller units where fuel must be used to produce heat for radiation or hot water. Savings in excess of forty per cent can be demonstrated with very moderate capital outlay.

The boilers themselves represent a large plant investment and deserve good care to promote long life. The nature of the water used has a strong bearing on the wear of the tubes, and preventive measures should be taken to avoid scale accumulation. Probably there is as much "bunk" in many claims for feedwater treatment as in any proposals which come to the attention of a hospital engineer. However, there are tried and true methods of applying antidotes to injurious feedwater, based on sound chemical engineering. Discrimination is highly necessary in solving this problem. The hospital without adequate stand-by equipment in boilers, feedwater pumps and other accessories is in a hazardous position from an operating standpoint. Incomplete equipment in this vital spot is short-sighted economy and entails great risk of a highly damaging shut-down of the whole hospital.

Elevators

Elevators require checking up periodically. The lubrication of them is simple enough if followed in routine, but care of elevators is easily overlooked. Inspection comes with insurance protection and weight tests are required by some of the companies and also by statute in some localities.

Internal Communicating Systems

Dial telephones are now generally superseding manual exchanges and this system has reached internal communication. If the hospital is a large one requiring more than one telephone switchboard operator, investigation of dial telephones in an automatic system is to be commended. With many stations in use, internal calls make up a proportionately larger part of the switchboard load, and instantaneous connections and call signals speed up the inter-departmental telephoning in a remarkable manner. An operator's time can be devoted to outside business, and while equipment rentals are higher, a saving in payroll may be found to reduce telephone cost. Referring inquiries for patients to an "information operator" with facilities to handle this business patiently and effectively, apart from switchboard routine, is an outstanding feature of an up-to-date hospital telephone office.

X-ray Department

No part of the hospital needs such costly so-called fixed equipment as the x-ray department. An accepted bid of the x-ray manufacturer does not cover the cost of complete installation. Do not forget that the proposal usually sells the material at the factory and you must get it to your door. Main transformers from the power company must be large enough, wiring, plumbing, and often construction alterations, sometimes with leaded walls, all come in before the project is available for use. It is our business to plan such changes from start to finish, and vouch for no estimate of real cost until the entire job is thought through from beginning to end. X-ray work is complicated, and for this reason we have to look out for unwelcome extras to the contract.

New Materials

We should keep abreast of progress in the adaptation of new materials entering into the manufacture of maintenance equipment. "Stainless steel" has brought especial satisfaction in the fabrication of kitchen apparatus such as work tables, sinks, and urns, as well as for table tops

in the wards and elsewhere. Aside from strength, durability, and brilliant lasting lustre of finish, research indicates this material to be highly impervious to most of the strongest solutions employed in hospital work. For hot water tanks, substitution of "Ever-Dur" metal for copper has appealed to us as a new alloy possessing wearing qualities promising long life, the cost approximating that of copper.

Fire Protection

No treatise on property can leave out fire protection, the ever present anxiety of hospital executives, especially of old hospitals. For those who have automatic sprinkler systems and wherever the property is subject to the rigid inspection of mutual insurance companies, the worry is appreciably less. Large institutions in the cities might well consider the electric protective system, which detects closed valves or flowage through sprinkler mains indicating open heads in action. Instantaneous notification of the fire department from the protective company's switchboard gives an added safeguard against fires which might escape detection for some time, particularly at night. For unsprinkled risks it should be borne in mind that agents representing stock insurance companies should not limit their services to taking premiums. They should, and many of them do, expect to call from their companies expert assistance in inspection of wiring, smoke flues, combustible material, and all sources of trouble, together with advice as to suitable fire extinguishers, water pressure, hose lines, and other methods to prevent a conflagration. Local fire departments, too, should cooperate in prevention service. Incidentally, commenting on the human side of this problem, fire department officials still report carelessness in smoking to be the probable cause of 90 per cent of hospital fires.

Outside Consulting Service

Granting that you have a capable engineer or plant superintendent in charge of your property, we maintain that a check-up of power equipment by outside talent is desirable from the important viewpoint of reliability and uninterrupted service. Boilers, pressure vessels, especially those requiring heat, and in generating plants, engines, generators, refrigeration compressors and coils should have their operation protected under insurance. Your own engineer is concentrating largely upon your own plant, while an insurance inspector has examined hundreds like it, and he will detect weakness in your boiler or your hot water heater or your generator that would easily go undiscovered until an accident reveals the cause of a break which might mean a serious handicap to routine hospital operation. The premium cost is well warranted. Financial recovery is assured against breakage, but more important is the compulsion to keep apparatus in good order and take no chances. Seven days each week and twenty-four hours each day we must keep going while industrial plants can generally shut up shop nights and holidays, allowing a margin of time for repairs. Hospitals take no holidays. We deserve the best expert advice and assistance in order to guarantee continuous service in so far as is humanly possible.

Finally, I would emphasize the wisdom of engaging outside consulting service on important substantial additions or alterations to the power plant. By this is meant obtaining a qualified impartial engineer, who has no equipment to sell, and who can bring a wide experience to bear upon the best solution of the hospital's problem. While there are technical methods peculiar to hospital maintenance, new procedures in the wider field of engineering practice should not pass by us unnoticed. Architectural talent for new buildings or reconstruction is accepted as necessary, and specialized professional assistance of another type is absolutely essential to insure consistent power plant investment and satisfactory economical operation.

"The physical set-up of a hospital, however magnificent its architecture, or its extent of floor space, or its internal arrangements, or completeness of equipment, does not make of itself an institution of signal service in the alleviation of human suffering.

"The scope and usefulness of this institution conceived and born in the common desire of the people and the profession to render a special service to humanity rests upon the understanding of its aims, its objects, and its difficulties, in the public mind. For without this harmonious cooperation and mutual understanding and confidence, it would have fallen far short of attaining that goal which the bright promise of its inception justly warranted."

William Gerry Morgan, M.D.—In an address at the Doctors' Dinner, Reading Hospital.

Legal Decisions of Interest to Hospitals

NOTES upon court decisions which affect hospitals, or where the hospital was a party to the litigation.

Recent Cases

Liability of a Private Institution Permitting Treatment by a Non-Medical Practitioner

Hendrickson v. Hodkin, et al., 276 *N. Y.* 252, 11 *N. E.* (2) 899, *reversing* 250 *App. Div.* 619, 294 *N. Y. S.* 982.

The decision rendered by the Court of Appeals in this case, with Mr. Justice Lehman and Mr. Justice Finch dissenting is of sufficient importance to justify its inclusion largely as a verbatim transcription. Here follows, in substance, the facts and the decision of the court:

"Action by John Hendrickson against Samuel J. Hodkin, the Park East Operating Corporation, and another. From a judgment of the Appellate Division, Second Department (250 App. Div. 619, 294 N. Y. S. 982) reversing upon the law a judgment of the Supreme Court, Trial Term, for $40,000, entered upon the verdict of the jury in favor of the plaintiff, and dismissing the complaint, the plaintiff appeals. . . .

"The respondent Park East Operating Corporation is a private hospital operated for profit. The question involved relates to the duty which it owed to appellant, a patient. Appellant (Hendrickson), a truck driver, had a sore on his lower lip for which he had received treatment at various hospitals, but it continued to trouble him. He heard of the defendant Rigley, who had been a chauffeur and also sold ointments to cure skin diseases. In 1933, Rigley returned to Ireland, his native country. On his return to New York he brought back an old remedy for the cure of cancer which had been used in his family for 200 years; also Irish newspaper accounts of cures made by the use of the salve. Rigley arranged a meeting with appellant at the home of a man named Smith. He showed appellant Irish newspapers containing accounts of cures made by the use of the salve. He stated that he had cured a cancer on Smith's face and showed him a bottle which he said contained the cancer removed from Smith's face. He told appellant that the sore on his lip was just a crab, and said he could cure it in thirty-one days. It does not appear that Smith ever suffered from a cancer. Two other meetings took place at which Rigley tried to persuade appellant to try the cure. At the third meeting, appellant's brother, who was expected to furnish the money to pay for the treatment, was present, and he told appellant he would not be a party to the matter unless a doctor approved and supervised the treatment. Appellant then told Rigley that he insisted upon having a doctor. A doctor, who was a relative of appellant, was called in, but he advised against any treatment except at a hospital and under a physician's supervision. Later Rigley telephoned appellant that he had secured a doctor and thereafter he took appellant to the office of the defendant, Dr. Hodkin, whom appellant had never met before. The doctor, after giving appellant a superficial examination, told him that it was a very serious case and that a cure would cost $10,000. Later, he reduced the amount to $3,000. The doctor and appellant's wife talked over the telephone with appellant's brother. Some kind of an arrangement was made, and on March 22, 1933, appellant was taken to resident's hospital. There is expert testimony from hospital physicians that at the time the small superficial cancer on appellant's lip had been cured by the treatment which he had received at the other hospitals where he had been treated and that he was only suffering from the after effect of the radium treatment which he had received. Appellant expected to be taken to Wyckoff Hospital, but while on the way in an automobile was told by Rigley that Dr. Hodkin had made arrangements at Park East Hospital. Rigley at the same time told him certain papers would have to be signed as a mere formality. Upon entering the hospital appellant found Dr. Hodkin there, who introduced Rigley to the superintendent and executive manager of the hospital, as the 'man who has the cure.' Appellant signed, without reading, certain papers which he was assured were mere formalities to relieve Rigley in case of any unusual accident and had nothing to do with the treatment. Appellant was placed in bed, and Rigley, in the presence of Dr. Hodkin, proceeded to grind an arsenic compound and make a paste. . . .

" . . . Rigley scratched appellant's chin until the blood came and then applied the paste and

● Copies of all issues of the magazine containing "Legal Decisions of Interest to Hospitals" should be carefully filed for future reference. The series of articles when completed will contain citations of all the legal cases for each state, as well as the court decisions in the Federal and Canadian Courts. This column will discuss each new case as it is reported.

fastened it on with a bandage. During the time the hospital nurse was in the room, Rigley told her he was not a doctor. Referring to the paste, Rigley told her that it contained white arsenic and herbs; that it was the most powerful poison in the world, but that his herbs controlled it. . . . In two or three days appellant commenced to suffer pain and his face commenced to swell. Rigley put new skin on the lip where the abrasion was in an effort to stop the flow of saliva. He told the nurses to administer aspirin and whisky in case of pain, and they did so. . . . After appellant had been in the hospital two or three weeks, Dr. Hodkin came into his room with the superintendent of the hospital and a hospital doctor. He said, 'I will show you this . . . and see how he is progressing.' . . . He said, 'I don't know a darn thing about this . . . this is all new to me.' The hospital physician asked him, 'Didn't you have that analyzed or looked into?' He replied, 'No. It is his secret. The only one that knows anything about it is him (Rigley). He said he could not have it analyzed because there are herbs in it and you could not find out what the herbs are.' The herbs nobody can find out. He is the only one that can get it.' The superintendent said, 'We will have to play along with him (Rigley). If everything comes out all right, we will be all taken care of.' . . . The paste was allowed on appellant's face for twenty-one days although medical experts testified that it should never be allowed to remain on over eighteen hours. Appellant remained in the hospital fifty-nine days, at the end of which period his hospital bill was in arrears, and the superintendent insisted upon his leaving. When appellant left the hospital the flesh had been eaten away from the lip and chin. There was no lip or chin left, and his teeth fell out. It is not necessary to give the horrible details of his condition. Medical experts testified that the treatment was a competent producing cause of his condition.

"The foregoing is a statement of the facts which the jury might have found. There were issues of fact which were resolved by the jury in appellant's favor. As the reversal was upon the law we are bound by the facts which the jury might have found.

"The evidence introduced by the appellant . . . justified the jury in finding that the purpose of his being there was for an improper treatment by a layman, 'the man who has the cure,' as stated by Dr. Hodkin when he introduced Rigley to the superintendent; that the hospital records showed that Rigley actually personally treated appellant; that nurses, hospital physicians, and the superintendent and executive manager knew, during the period that appellant was being treated by Rigley, not under the supervision of a doctor; that the superintendent knowing all about what was going on, stated, 'We will have to play along with him. If everything comes out all right, we will be all taken care of.' The superintendent knew that the paste being applied was a secret preparation, its contents known only to Rigley.

". . . the superintendent knew or should have known that Rigley was engaged in the commission of a crime and that the hospital, in affording its facilities for pay, was aiding and abetting him in the performance of such criminal act. Education Law (Consol. Laws, c. 16), par. 1263.

"Private, noncharitable hospital corporations operated for profit are liable for the torts of their executive officers committed within the general scope of their authority. . . .

"In the case at bar the basis of liability is not the negligence of the doctor or nurse in charge, but the wrongful conduct of the executive manager and superintendent acting within the scope of his authority in affording for pay the use of the hospital and its facilities for the purpose of the commission of acts which constitute a tort and a crime in violation of a duty owed a patient. . . ."

While it is not prudent to predict at this time what influence this decision will have upon the courts of the country, still it is safe to venture a surmise that it will have its effect upon the law relating to the liability of private institutions in similar cases. Executive officers of any institution, private or public, should examine with care any application of a patient for unusual treatment by a person who is not a medical man. It is within the power of the executive officer to refuse to permit the treatment. If he does permit such treatment in his hospital with consequent injury to the patient, serious difficulties are bound to follow as they did in the case commented upon. A safe rule to follow is this: Admit no practitioner, medical or otherwise, to the facilities of the hospital unless he meets the qualifications prescribed by the technical staff of the institution. If there be no such technical qualifications, then consult those of the local medical society. At all events, first ascertain that the practitioner is entitled to practice medicine under the laws of the particular state, for in most states it is a criminal act to practice medicine without permission of the licensing authorities of the state.

Upholding the Rights of a Private Institution to Exclude a Surgeon from Practice in the Hospital

Strauss v. Marlboro County General Hospital, (*South Carolina*), 194 *S.E.* 65

This action was begun by D. D. Strauss, asking

that defendant hospital be declared a public institution, and that certain rules, excluding the plaintiff from practice in that hospital, be revoked. Defendant demurred to the complaint, and the trial court dismissed plaintiff's action. This appeal followed, the Supreme Court of South Carolina sustaining the order of dismissal entered in the trial court.

At the outset the court said: "It is conceded, we understand, that if Marlboro County General Hospital is a private institution, the action must fail and the appeal be dismissed." This followed logically because of the learning upon this question, laid down at an early date by Mr. Justice Story in the celebrated case of *Trustees of Dartmouth College v. Woodward*, 4 *Wheat.* 518. It was there said: "When, then, the argument assumes, that because the charity is public, the corporation is public, it manifestly confounds the popular with the strictly legal, sense of the terms. . . . When the corporation is said, at the bar, to be public, it is not merely meant, that the whole community may be the proper objects of the bounty, but that the government have the sole right, as trustees of the public interests, to regulate, control and direct the corporation, and its funds and its franchises, at its own will and pleasure. Now, such an authority does not exist in the government, except where the corporation is in the strictest sense, public; that is, where its whole interests and franchises are the exclusive property and domain of the government itself."

It is readily seen that if this test be applied to the defendant, admittedly a private corporation, the plaintiff cannot maintain such an action. Courts have generally demonstrated reluctance to attempt to direct the affairs of a private corporation. Generally, courts will not compel a board of trustees to admit a surgeon if the rules of the hospital corporation exclude him, and all others in his class.

Liability of Private Hospital for Loss of Personal Property of Patient

Yohalem v. Yasuma, (*New York*), 300 *N.Y.S.* 929

The plaintiff, Dina Yohalem, brought an action against the defendant, who operated a private hospital, to recover damages for the loss of bridgework which had been removed from her mouth preparatory to an operation, and which had been given for safe keeping to one of the defendant's nurses. Defendant filed a motion to dismiss the complaint for insufficiency, i.e., for failing to allege facts upon which defendant could be held liable if the case were to go to trial. The court (City Court of New York, Bronx County) denied the defendant's motion.

It was said by the court: "At bar, plaintiff alleges in her first cause of action a bailment of her personal property; in her second cause of action, she pleads the loss of said property through the negligence of defendant." The court further said: "Persons or corporations conducting private hospitals for profit have no exemption for the negligent acts of their servants."

Of course, if, upon a trial of the case plaintiff should prove that defendant's nurse was in fact an employee of the hospital at the time of the operation and at the time when the bridgework was given to her, then plaintiff could clearly recover for the loss; for in such a case the person, or corporation to whom the property has been given for safe keeping is bound to return that property or else pay its value to the owner.

Liability of General Hospital for Negligence of Special Nurse

Ware v. Culp, (*California*), 74 *P.* (2) 283

Plaintiff, Bessie Ware, sued defendant to recover damages for burns caused by electric heating pads. Judgment was for the plaintiff and that judgment was reversed upon this appeal.

It appeared that plaintiff was under the care of her own physician, and that she had been burned by an electric pad, placed upon her leg by a special nurse in the employ of the patient. The defendant contended that this nurse was employed solely by the plaintiff, and that she should be regarded as plaintiff's servant, not as the servant of defendant. The District Court of Appeal, Third District, favored defendant's argument, and said, "Assuming, without deciding, that a special nurse might be employed by a general hospital for the care of a patient under circumstances which would render the hospital liable for her negligence, that relationship between the hospital and the nurse depends upon the contract which exists. The burden of proving that relationship rested on the plaintiff in this case. She utterly failed to establish any such relationship. The evidence in this case appears to be just the contrary. According to the usual custom, the special nurse was employed by the plaintiff in this case through her representative, Dr. Miller. . . . He personally waited at the hospital until she arrived. He then turned his patient over to her exclusive charge. There is no evidence that any general nurse or employee of the hospital ever saw the plaintiff or attempted to direct or advise the special nurse with respect to the care of the patient after she took charge of the plaintiff until after the accident occurred. . . . When the services of the special nurse were dispensed with, she was paid directly

by the plaintiff and not by the defendant. No item for her services was included in the hospital bill. There is substantial evidence that the special nurse was in the employ of the plaintiff subject to the exclusive control and directions of her private physician, Benjamin F. Miller.

The court went on to comment upon the law applicable, saying, "Ordinarily, in the absence of an agreement to the contrary, a general hospital is not liable for the negligence of either an attending physician or nurse on account of unprofessional conduct." This, of course, assumes that the nurse is not an employee of the hospital, but of the patient. However, some courts have held that the negligence of an attending nurse, in the employ of the hospital, cannot be charged against the hospital because her professional conduct is not subject to the control of the administrative officers of the hospital. Such reason is not compelling, for it is a matter of common knowledge that a nurse employed by a hospital is subject to direction and control in her professional care and treatment of patients.

The plaintiff attempted to urge that the doctrine of *res ipsa loquitur* should be applied (that defendant should be held liable merely upon proof of an injury happening to plaintiff, caused by a device under the exclusive control of the defendant). Of this the court said, "The doctrine of *res ipsa loquitur* cannot aid the plaintiff under the circumstances of this case. Notwithstanding the fact that the hospital furnished the electric pads, they were under the exclusive control of the doctor and special nurse after she took charge of the patient." Finally, the court entered an order that should have been entered by the trial court—the judgment was reversed and the trial court was directed to enter a judgment in favor of the defendant.

New York

Liability of Charitable Corporation for Negligence of a Physician

Van Tassell v. Manhattan Eye and Ear Hospital, 60 *Hun.* 585, 15 *N.Y.S.* 620

In this action for damages against a charitable corporation based upon the negligence of a physician, plaintiff took a judgment which, upon this appeal, was reversed and a new trial ordered.

It was shown that the operation was performed for the purpose of opening a duct leading from the eye to the nostril; that the operation was skilfully performed; that instructions were given to let the bandage remain on the eye during the night. The following morning plaintiff could not see with the eye.

Plaintiff's case for negligence was apparently grounded upon the supposed negligence of the physician in directing that the bandage remain on the eye during the night. This was not enough to warrant a verdict and judgment for the plaintiff, the court saying, "Without other proof, we think no action is made out. The defendant is not liable, except for the omission to give due care to the selection of its skilled employees, surgeons, and others."

Liability of Hospital in Patient's Death Caused by Jump from Window While Temporarily Insane

Harris v. Woman's Hospital in the State of New York, 27 *Abb. N.C.* 37, 14 *N.Y.S.* 881

This action was begun by a husband as administrator of his wife's estate to recover damages for her death, allegedly caused by the negligence of the hospital in permitting her to jump from a window while temporarily insane. The lower court dismissed the complaint, and plaintiff's exceptions to the action of the trial court were overruled, it being held that there was no evidence of negligence.

It appeared that the plaintiff's wife had undergone an operation by a skilful surgeon. Some four days later the attending nurse was called by a patient in the same ward, who told her that Mrs. Harris had been attempting to get out of bed. The nurse told Mrs. Harris that she must remain in bed, and went at once to the house surgeon for instructions. The latter prescribed a sedative, which was administered to Mrs. Harris by the nurse, and the patient became quiet. About three hours later the nurse heard a noise, and upon investigation found that the patient had jumped from a window. Of these facts the court made the following comment: "There can be no charge of negligence unless there is a breach of duty imposed by law; and, to ascertain whether there was negligence on the part of the hospital authorities in this case, the duty which the law imposes upon them must be considered. Their duty is to exercise ordinary and reasonable care in furnishing medical attendance and nursing to the patients whom they receive. This care is not to be apportioned to the amount of money which the patient contracts to pay, and is wholly irrespective of any consideration growing out of the fact that the sum paid, or agreed to be paid, is less than the actual cost to the institution of maintaining, treating, and caring for such patient. The same care must be taken of a charity patient as of one who pays the highest price demanded for hospital accommodation." Having laid down the duty owed to the patient, the court next proceeded to inquire whether there had been any violation of that duty under the facts

presented. The conclusions upon this question were resolved in favor of the hospital by this language: "There is nothing in this case to show that the house surgeon or the nurse in attendance, or the hospital authorities had any reason to apprehend any mental aberration of the deceased, much less the particular accident of the night in question. If the fact that the deceased attempted to get out of bed about one o'clock was sufficient to call for immediate attention, it was given. The nurse reported the fact instantly to the physician, who immediately prescribed a sedative, which was administered. . . . But if there was any want of care in not placing a special watch upon the deceased all that night to see that she did not leave her bed, the consequences of neglecting to do so were too remote to fasten legal responsibility upon the house surgeon or the hospital authorities. An injury to her health due to interference with the success of her operation by her incautious movements is the utmost that could in reason be apprehended. Her death in the manner detailed was not to be expected. It was not shown that there was any possible ground for apprehending a suicidal tendency on her part. But there was in fact no care omitted. . . ."

Liability of Hospital for Burns by a Hot Water Bottle

Joel v. Woman's Hospital in State of New York, 89 *Hun.* 73, 35 *N.Y.S.* 37

The cause of action here arose out of plaintiff's being negligently burned by a hot water bottle. Her complaint was dismissed by the trial court and upon this appeal, the judgment of dismissal was affirmed. Defendant was a public charitable corporation.

The court cited the Van Tasell Case, ante, and held that defendant would not be liable for the negligence of a nurse unless it were shown that someone in authority had been guilty of negligence in hiring her.

Similarly, in the case of *Haas v. Missionary Society of the Most Holy Redeemer,* 6 *Misc. Rep.* 281, 26 *N.Y.S.* 868, a religious corporation was held not liable for the negligence of an employee where due care had been used by the authorities in the selection and hiring of that employee.

Ward v. St. Vincent's Hospital, 23 *Misc. Rep.* 91, 50 *N.Y.S.* 466, *reversing* 39 *App. Div.* 624, 57 *N.Y.S.* 784

Plaintiff, a pay patient, was burned by hot water bottles. The defendant was a charitable hospital. A verdict was rendered in favor of the defendant, and plaintiff made a motion to set aside the verdict and to have a new trial. Both motions were dismissed.

Plaintiff contended that the defendant should be held liable upon two grounds: breach of contract, and negligence of the nurse in question. This latter contention was based upon the fact that plaintiff was a pay patient, and thus, not a beneficiary of defendant's charitable work. Arguments of counsel were disposed of by the court, saying, "The counsel for plaintiff with some ingenuity, has, in the complaint, in the evidence offered, and in the brief submitted, laid almost equal stress upon the breach of an express contract by the defendant as upon the breach of duty imposed by law; but no ingenuity can alter the cause of action here. It cannot be doubted that there would be a cause of action on the facts here presented independent of any contractual relation, if the plaintiff established negligence sufficient to hold the defendant. . . . This, then, is an action in tort." The court recognized that defendant was a charitable hospital, and said, "As I read the cases, such a defendant is only liable for negligence in the original selection of its servants. (The rule in some states is that the charity is not liable to a patient for negligence at any time.) Having fulfilled that duty, it is not liable for the subsequent act of such servant, however careless or negligent, unless previous knowledge of unfitness has been brought home to the corporation. . . . Much may be said against the soundness of this principle, and whether it would not be wiser to hold even public charitable institutions to a higher degree of care; but in this country it has been settled that for the promotion of works of humanity, and for the greater good of the greater number, that this is a sound public policy."

The fact that defendant accepted pay for its services was held by the court not to amount to a waiver of its right to claim an exemption from liability for the negligence of its nurses.

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American College of Hospital Administrators

THE American College of Hospital Administrators, through the action of its Credentials Committee, on February 11, 1938, accepted forty-four administrators into its organization.

Membership in the American College of Hospital Administrators is awarded upon a merit basis. The College thus gives recognition to successful hospital administrators and with their cooperation furthers its program of education in the hospital field.

The following newly elected members are from various sections of the United States and Canada and will be presented with their certificates at the formal exercises of the Fifth Annual Convocation of the College, Dallas, Texas, September 25, 1938:

Fellows

Sister Mary Bernadette, Supt., St. Mary's Hospital Madison, Wisconsin

Sister Marie Stephen Fox, Supt., St. Vincent's Hospital, New York City

Morris Hinenburg, M.D., Ex. Director, Jewish Hospital of Brooklyn

Mother Tarsicia (Fries), Mother Provincial of the Sisters of the Poor of St. Francis, St. Clare Convent, Hartwell, Cincinnati, Ohio

Sister Regina (Maloney), Sister Superior of the U. S. Marine Hospital, Carville, Louisiana

Henry M. Pollock, M.D., Supt., Massachusetts Memorial Hospital, Boston

Josephine E. Thurlow, Supt., North Adams Hospital and School of Nursing, North Adams, Massachusetts

Charles F. Wilinsky, M.D., Director, Beth Israel Hospital, Boston

Members

Catherine H. Allison, Supt., Winona General Hospital, Winona, Minnesota

Sister M. Assisium (Hayes), Supt., St. Lawrence Hospital, Lansing, Michigan

Sister Loretto Bernard, Asst. Supt., St. Vincent's Hospital, New York City

Sister Mary A. Brady, Supt., St. John's Hospital, Joplin, Missouri

Sister Theonilla Brogger, Supt., St. Mary's Hospital, Cincinnati, Ohio

W. W. Butts, Supt., St. Luke's Hospital, Bethlehem, Pennsylvania

Sister Roberta Callahan, Asst. Admstr. and Dir. of Nursing, DePaul Hospital, St. Louis, Missouri

Winifred Culbertson, Supt., Children's Convalescent Home, Cincinnati, Ohio

Frank B. Gail, Bus. Mgr., West Jersey Homeopathic Hospital, Camden, New Jersey

William H. Frersing, Supt., The Deaconess Hospital, Cincinnati, Ohio

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Relationship Between Public and Private Hospitals in California

ARTHUR J. WILL, Olive View, California

THE subject of the relationship between public and private hospitals is broad enough to allow sufficient latitude so that almost any subject relating to a public or private hospital, may be discussed. As I have not been restricted, I have chosen a subject, which, at this present time, is extremely important to us in Los Angeles County.

Eligibility for Public Care

There has always been a question in the minds of all people interested in hospital administration of the extent to which a public hospital may go in admissions of people who are on the borderline of ineligibility for public care. The public administrator's interest in this subject is the desire to serve the tax-payers by conserving, insofar as possible, their funds. The private hospital administrator's question is, of course, his inability to get some of these borderline cases who could possibly pay even a small amount for their hospitalization. It is useless and needless to present the subject of the discussion any further to you people who are so well acquainted with all of its various phases.

The State Law has permitted the admission to public institutions (I am referring now, generally, to county institutions including general hospitals, tuberculosis sanatoria and otherwise) of—

1 Those people who come under the definition of indigents described in the Welfare and Institutional Code;

2 Those emergencies, or so-called emergencies, coming under Section 4041.16 of the Political Code;

3 That particular provision of the State Law which makes it mandatory that county hospitals admit an expectant mother unable to pay for the care necessary at the time of delivery;

4 Those cases under restraint mandated through a Superior Court for observation in a psychopathic ward and those others afflicted with a communicable disease whom the Health Officers place for treatment in an isolation or communicable disease ward.

Presented at the Convention of the Association of Western Hospitals and the Western Conference, Catholic Hospital Association, San Francisco, California, February 28 to March 3, 1938

The Author

● **Arthur J. Will is the Administrator of the Olive View Sanitarium, the Tuberculosis unit of the Los Angeles County Hospital System.**

In some political subdivisions all public hospitalization is provided under the Welfare or Charities Department, as in the County of Los Angeles. This includes the care of tuberculous indigent in Olive View Sanatorium and its contract private institutions providing for the overflow; also at the general hospital, which has tuberculosis wards. Both are under the general supervision of the Superintendent of Charities. The State Law, however, covering the care of those persons afflicted with tuberculosis, whether private patients or indigents, is set up in the general health laws and the rules governing the payment of subsidy by the State to the other political division is also to be found in the general health laws. The legal question then develops as to whether or not the determination of eligibility for public care of tuberculosis individuals comes under the jurisdiction of the charitable or welfare agencies in the county or under the regular health officers. It, of course, can be conceded that the management of hospitals provided for this purpose may be so designated by the local Boards of Supervisors and by provisions of County Charters that the Welfare or Health Officer, as the Board may wish, will be in charge. In the County of Los Angeles, the Superintendent of Charities is given his control of the tuberculosis hospitals by *Section 22 of the County Charter.* It is my understanding that a State law cannot abrogate a provision of a local County Charter, voted by the people. The reason for my particular reference to tuberculosis in this connection is because that happens to be my particular work and offers to me the major problem involved in this discussion.

Under the Kern County Decision it is questionable whether the County of Los Angeles or any other county can refuse the care of any person who is afflicted with tuberculosis who is not able to provide that care otherwise.

Distinction Between Requirements for Material Relief and Medical Relief

Both the State Law, and in general, the County Rules Ordinances, adopted by the various counties make a distinction between the eligibility requirements for material relief and for medical relief. That is to say, the financial limitations are not as strict for medical care as they are for the issuance of material aid to an applicant. There are many contributing reasons for this which, generally of course, are sound, as they apply to the particular theory that by refusing expensive medical care and hospitalization to an otherwise self-supporting family we may bring that family to a point where it is necessary for them to go on the relief rolls in order to secure not only medical care and hospitalization, but material relief. We find, therefore, except in the case of a person who has obviously sufficient resources to provide any reasonable medical care and hospitalization that a public institution may, by a liberal interpretation of the law, assume the medical care for most any applicant. It is a fact that there is some difference of opinion in legal circles as to whether or not the Welfare and Institutions Code has completely superseded other sections of the Political Code which have governed our admissions.

State Law Admits of Liberal Interpretation

The State Law itself has been sufficiently broad and has not definitely set up financial limitations nor residence requirements for admissions. Enabling Acts have provided discretionary powers to the various Boards of Supervisors permitting them to determine a policy for their own local community. Up to the beginning of 1932, these policies were pretty largely acknowledged as providing only for the care of indigents. Since 1932, the change in the general public's attitude toward social legislation and local hospital facilities has materially broadened and liberalized the local policies formally in effect, thus permitting the inclusion for care, of many people whom we have felt in the past should be private hospital cases.

We are, in Los Angeles County, required to give care not only to indigents qualified under the Welfare and Institutions Code but also to non-residents whose immediate physical condition may indicate an emergency serious enough that the lack of such care might not only immediately endanger their lives but seriously affect their future health.

Such a governing factor is permissible of extreme liberal interpretation. It is this type of legislation, undoubtedly the result of public opinion and pressure, which is enacted as a result of an increased liberal public opinion that makes it extremely difficult for a public hospital administrator to serve the tax-payers of his community in the manner in which those tax-payers would like to be served.

In the meantime, as this liberalization has become more and more effective, there has developed a growing concern on the part of private hospital corporations as to how long they might expect to stay in business. While it is true that for the past year and a half, approximately, private hospitals have been very well filled, a business recession such as is now apparent in our economic life is rapidly and almost spontaneously developing a greater number of applicants for public care. The private hospitals in the very near future face an extremely unhappy economic problem. Private hospitals, anticipating such a condition, have taken a concrete step towards securing for themselves the business provided by the low wage-earning group and those persons suffering temporary economic stress that otherwise must of necessity be considered as properly eligible for public care.

This step was definitely set up in *Assembly Bill No.* 1132, now a law, which permits the organization of a non-profit corporation to be operated under the general supervision of the State Insurance Commissioner contracting with individuals for hospitalization on a premium basis ranging from 3 to 7 cents a day, depending upon the number of people involved in the family, and also contracting with private hospitals to furnish necessary hospitalization when needed by these individuals. There can be no question that the use of this plan would definitely relieve the public institutions of certain obligations to a large group of our citizens. This can only be accomplished, however, by a revision of the laws now permitting the care in public institutions of just those individuals which the private hospitals hope to care for themselves.

As a public administrator or officer, should you or I be interested in reducing the public financial load, and effect through the Western Hospital Association and other organizations the necessary change in legislation to reduce the number of people now eligible for care at public expense, or should we take the more liberal view and go along with the very definite paternalistic attitude so evident at the present time? It is doubtful if the private hospitals can secure a change in the State Law without the support of the public agencies now giving not only medical care but material relief to our more unfortunate neighbors.

On the general theory of law as set down in the old *Pauper Act*, "that, insofar as it is possible, an applicant for public relief shall be required to apply his own property to his support." I am receptive to any program, whether of insurance or otherwise, which would enable those citizens on this economic borderline to provide themselves with their own medical relief.

These views that I have presented are the result of my experience in Los Angeles County and represent generally my personal opinion. My personal opinion, however, is, as must be apparent, taken from the actual feeling of the majority of the executives in the Department of Charities of our County and, probably, the members of the Board of Supervisors and public opinion.

Many other questions present themselves in connection with this subject. I believe that these incidental subjects are too large in themselves to be discussed at this time but might well be subjects for discussion by committees which could report later.

It would, of course, be extremely advisable if a sound philosophy could be adopted by all of the public hospital administrators throughout the state in which private hospitals could join enthusiastically. Such a philosophy, of course, would need to secure to the local administrator enough discretion to permit him to provide for necessities developing through the peculiar local conditions surrounding his community.

Taps

There are few fixtures used in the hospital which are more continuously used or more frequently abused than water taps, technically known as bibbs. The present day bibb has been a gradual development from the original spigot with a through and through plug with a slot through it. This was succeeded by the plug type consisting of a circular aperture or seat in the body of the valve and a crank type lever which raised and lowered a rubber stopper. Then came the screw type stem which lifts the stopper as little or as much as desired, thus giving an accurate control of the volume of water allowed to pass through the opening. This was followed by the so-called "quick closing" now in common use. Quick closing is effected by simply making the thread of the stem so coarse in pitch that a halfturn will close or open the aperture to the extent most frequently needed.

As a metal to metal closure was not found to be desirable or easily renewable, there soon was developed a renewable disc type. In its earlier form this consisted of a seat cast as a part of the body of the fixture and was closed by pressure from a disc attached to the lower end of the stem. The disc most commonly used is a composition of rubber, graphite, and asbestos vulcanized to a point giving maximum balance between the elasticity required for tight closure and the hardness required for durability. There is also a disc made of fiber, but this is not considered as satisfactory as the rubber composition.

The most recent improvement is the renewable seat type. In this type the seat is made of a much more durable metal—than is the body of the valve, is simply screwed into place and is easily and quickly renewable whenever it shows signs of wear.

In use it is usually the hot water tap which gives the most trouble. This is due to three factors: the disc is softened by the heat and therefore wears more rapidly; after it is shut off for some time the body cools and shrinks, causing a loosened closure which may lead to a small leak and resultant erosion of either disc or seat; if the water contains hardness, the hard salts deposit on the inside of pipes, small flecks of this scale may lodge on the disc or seat and cause a small scratch or channel, which soon develops into a larger leak.

With the present renewable disc and renewable seat faucet there is no good reason why a faucet should not last as long as the building itself. All that is necessary is to renew the disc as soon as the faucet begins to leak and if the new disc does not stop the leak it is possible that the seat is at fault. Renew the seat and the faucet is as good as new.

In purchasing faucets it is important that a standard type from an established and reliable manufacturer be selected in order that repair parts may be secured when needed. Otherwise the lack of a ten-cent *repair* part may require the purchase of an entirely new fixture. Also the faucets throughout the building should be of a single type in order that but one set of repair parts need be carried in stock to facilitate repairs.

One of the greatest enemies to the life of the faucet is to *almost* close it. The small aperture left by failure to close it tightly provides a channel for a small leakage which rapidly increases wear on disc and seat and soon requires that either or both must be replaced.

The Hospital Problem of Alcoholism

Recommendation for Establishment of Farm-Work Colony Directly Subsidized from Liquor Taxes for Rehabilitation of Alcoholics

J. C. GEIGER, M.D., San Francisco

THE ERA of theoretical prohibition in these United States ended in 1932. The era of applied temperance was thus thoughtfully begun. That the problem of alcoholism has not been solved is painfully obvious statistically. For instance, the records of the Police Department of San Francisco show that the arrest of persons classified as being drunk in public places increased from 14,472 in 1932 to 32,530 in 1937, an increase of over 100 per cent. The admissions, classified as intoxicated, to the Emergency Hospitals of the Department of Public Health of persons involved in accidents, the majority of which were in automobiles, showed an increase from 11.7 per cent of total admissions in 1933 to 14 per cent in 1937. When these figures are broken down into records of males and females, there are definite indications of increases of intoxication in both sexes. The admission rate for male alcoholics in 1933 was 13.6 per cent; in 1937, 16.2 per cent; and for females, 6.7 per cent in 1933; 8.4 per cent in 1937. The deaths reported from alcoholism in San Francisco, however, have decreased from 31 in 1933 to 25 in 1937, the largest number (37) being reported in 1934. The deaths reported as alcoholic cirrhosis of the liver have steadily risen from four in 1933 to thirty-six in 1937, the increase being approximately the same for both sexes. The relation of hospitals to the problem is particularly shown when the figures of the Emergency Hospitals of the Department of Health are analyzed with reference to those treated only for alcoholism. In 1933, there were 1,159 persons treated, and in 1937, 2,017—an increase of nearly 90 per cent.

Pharmacologically, alcohol is a poison and in large doses, such as 1,000 cc., would be fatal. The users of one quart at a single sitting, therefore, should be warned. Anatomically and physiologically, alcohol acts most readily upon the upper and anterior portion of the brain. The higher nerve centers are first affected, producing stimulation, excitement; and, finally, a blunting effect. The clinical picture is usually defined as anima-

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tion, exhilaration, excitement, incoordination, stupor, sleep, coma, and finally, death.

Alcoholism and the Accident Rate

The accident rate alone offers ample evidence that over-indulgence in alcohol by individuals impairs the powers of perception and volition. As a result, many tests, some of which are chemical, some clinical, and some physiological, have been devised and standardized, in order that those involved in accidents might be properly recorded as to the degree of intoxication. Many court decisions rendered on the legal principle that a person cannot be made to testify against himself have placed these valuable tests in the realm of innocuous desuetude.

The Department of Public Health Emergency Hospital Service has done 232 tests for drunkenness in the last few years. Recent studies of two Stanford University investigators[1] cast considerable doubt on the reliability of the test for drunkenness which depends upon the alcohol concentration in the blood. Their studies on animals included those that were total abstainers and those that had been fed a definite amount of alcohol over a long period of time and could be classed as habitués. Chemically, the blood analyses of the two groups of animals were similar. The behavior of the two groups, however, was quite different. The motor co-ordination of the habitués was much better than the total abstainers. There was also considerable individual variation in susceptibility of different animals in the same group. The significance of these tests in relation to chemical diagnosis of drunkenness must be considered. These findings are in accord with those made on man and indicate that the amount of alcohol in the blood is not a reliable index of degree of intoxication. There still remains available for police court diagnosis a motor control test: walking a

chalk line, putting keys in holes, or some test of visual acuity. The chemical test has been that alcohol has been imbibed, not that the individual is drunk. A chemical drunk is not necessarily a physical drunk. After all, in the final analysis, it is how one acts, walks and talks after imbibing liquor; in other words, how a person carries his or her liquor. The best rule is: if you are driving—don't drink; and, if you are drinking—don't drive.

Prolonged and continuous indulgence, however, causes chronic alcoholism with loss of appetite, and often with impairment of the liver, kidneys and heart, neurologic involvement or psychoses. This type of case must be differentiated from the dipsomaniac who may have a recurrent and paroxysmal craving for alcohol. The hospital problem of alcoholism primarily begins with this chronic group. The present situation in the psychopathic division of the San Francisco Hospital of the Department of Public Health can probably be duplicated in many hospital centers. In this division, 40 per cent of the hospital facilities are in demand for alcoholics to be held and treated en route to commitment to state institutions. The advisability of placing patients with chronic alcoholism in a hospital or wards for psychotics is questionable, since the two groups have a different psychological background which makes them incompatible. The ordinary acute alcoholic is freed of his poison within twenty-four to forty-eight hours and, after this period, could usually be dismissed. On the other hand, an alcoholic with a psychosis is to be admitted and treated as any other insane individual.

Habitual Alcoholic

At this point, it may be advisable that a brief discussion of the habitual alcoholic be made. Most alcoholics are such on the basis of a character defect which is more responsible for this condition than any external or economic causes. In other words, a thoroughly healthy individual rarely becomes alcoholic. Moreover, a chronic alcoholic is usually suffering from chronic drunkenness from binate angles—one from the alcohol itself, and two from the initial character defect. It was Mellanby, as far back as 1919, who showed that ingested alcohol is absorbed from the gastrointestinal tract, a small amount being excreted in the urine, sweat, and expired air. Other scientific workers, notably, LeBreton, offer experimental evidence that alcohol may be considered a food. In this opinion, many physicians concur and prescribe alcohol as whiskey in moderation to many persons for various ailments. One of the least understood phenomena of the chronic alcoholic is his acquired tolerance; and, although the tolerance seems incontrovertible, the mechanism of its being acquired is quite obscure.

Alcoholism has been divided into: (1) the acute type; (2) the chronic type, with or without psychotic manifestations, such as the mania a potu, delirium tremens, hallucinations, delusions of persecution, Korsakov's psychosis with its loss of memory, falsifications and disorientation, and finally, paresis; the dipsomaniac; and, in addition, the relation of alcohol to the deficiency diseases, polyneuritis and pellagra.

Alcoholism as a Social Problem

Alcohol is the most widely used of the narcotic drugs and produces the greatest number and variety of mental disturbances. Its use constitutes an immense social problem, for which no good solution has as yet been discovered. Forel, discussing the situation in Switzerland, states that "in all countries where the alcoholic habit reigns, it accounts for from half to three-quarters of the crimes, a great share of suicides, of mental disorders, of deaths, of diseases generally, of poverty, of vulgar depravity, of sexual excesses and venereal diseases, and of dissolution of families. In fifteen large cities of Switzerland, one-third of the male suicides and one-tenth of the deaths in men above twenty years are wholly or essentially referable to alcohol."

The most serious social problem is seen, not in the psychotic, but in the chronic alcoholic, or habitual drunkard. He is the one responsible for much of the poverty and misery seen in families where most of the income goes for drink, and his excesses and brutalities fill many pages of police records without his ever appearing in a hospital as a mental case. The amount of alcohol consumed does not determine whether or not a person will become insane. Many deaths have occurred as a result of chronic alcoholism when no alcoholic psychosis has ever been present. On the other hand, an alcoholic psychosis may occur without any of the characteristic physical signs usually attributed to alcohol. It is the psychopathic tendency in an individual which determines the likelihood of an alcoholic psychosis more than the actual amount of alcohol consumed.

Among the factors predisposing to chronic alcoholism are both constitutional and accidental causes. Among the constitutional factors there are all kinds of neuropathic tendencies. Epilepsy, schizophrenia and brain injury seem to play an especially important part. A large class consists of those who are generally deficient morally and

who merely lose, through alcohol, the inhibitions which normally restrain them to some extent. Most of the work of psychiatrists is with this class, but actually the condition is not the result of alcohol, it is only made apparent and increased by alcohol.

Not all alcoholics, however, are psychopaths. Some are merely weaklings who permit themselves to follow the drinking customs of their social groups even when they realize the danger of such a course. Others drink merely because they see no reason for not doing so. Many have difficulty in making a satisfactory adjustment to life. They may have ambitions which exceed their ability to fulfill, or business or domestic affairs may be in an unhappy state. Alcohol lets them forget worries and disappointments, removes inhibitions and blunts critical judgment, letting them become care-free and important in their own minds.

Treatment of the Chronic Alcoholic

The treatment of the chronic alcoholic must be an individual one if it is to meet with any great degree of success. As has been said, the factors that have served to precipitate the habit do not differ in kind from those which produce other types of morbid reactions. Each case must be attacked on its own merits and as a special psychological problem. The training of a hard drinker to moderation has been tried for hundreds of years and has never had the slightest degree of success. The complete removal of alcohol over an extended period of time is the first essential. Without this measure there can be no permanent progress to a cure. The physical need for alcohol is not important and there are no such abstinence symptoms as appear in the case of morphine addiction, for example. The complete removal of alcohol is usually followed fairly speedily by great improvement, both in general health and mental efficiency. The really difficult task consists in the breaking of the habits of thought that impel to drinking. Sufficient weight must be given to the environment and to the influence of nagging friends and relatives who not infrequently make the patient feel that persistence in drinking has become a point of honor with him. The reformed drunkard must not be permitted to feel that he is an unfortunate weakling who is barred from the pleasures of drink simply because of his constitutional inferiority to his normal fellows. He must be made to feel that abstinence from alcohol represents the highest ideal of self-control and decency, so that he can be genuinely proud of his efficiency when he leaves drink alone. The alcoholic is best treated when he can be gotten to adopt the general idea that drinking causes a very great deal of misery and does almost no good, and that mankind as a whole would be much better off without drink. He must be allowed to feel at ease with his decency and must not, like the turtle in the ball-room, "get homesick for the mire."

There is no use in attempting the cure of an alcoholic against his wishes, and the large group of psychopaths and congenitally weak-willed are almost never cured permanently, no matter what methods are used. Institutional treatment is far better and more successful than home treatment, and some of the most successful institutional treatments have been on a purely voluntary basis. This implies, of course, that the staff of the institution are able and willing to present a hopeful picture to the patient and to fill him with a genuine enthusiasm and pride in his possibilities when free from all need for alcohol. Hopeful patients should not be treated in the same institutions with psychopathic and degenerate drunkards. This last group are only secondarily alcoholics. Their alcoholism is merely one of the symptoms of a deeper and more fundamental mental disorder, and they not only fail to be cured, but they actually hinder the cure of more promising patients. It is of the greatest importance that the selection of cases for treatment be made with care if permanent cures are to be accomplished. Many of these patients must be largely made over and their whole mental attitude be brought to the state where pride and a sense of real achievement can serve to sustain them after the initial cure is accomplished. There is a very real contribution to social well-being which can be made, if this task is met squarely and effectively.

Treatment of Alcoholics in the Emergency Hospital Service

The treatment of alcoholics as carried out in the Emergency Hospital Service of the San Francisco Department of Public Health is as follows:

1 All patients upon admittance must be examined by the surgeon on duty, and all injuries or other conditions must be notated in register and on clinical bedside charts. Furthermore, all alcoholic patients with head injuries must be carefully observed medically and perhaps hospitalized; or instructions given accordingly if released.

2 Clothing of all patients must be searched and the contents tabulated and preserved in accordance with regulations.

3 Instructions as to treatment to be followed out must be written on charts by surgeon on duty.

4 Patients on admission are given magnesium sulphate or other physics as directed by surgeon on duty.

5 Gastric lavage, using warm tap water, for patients requiring washing out of the stomach, as indicated by the stage of alcoholism.

6 In case of excitation, give a solution known as D. T. mixture (sodium bromide and chloral) every four hours. Also, sodium bromide or other medication such as paraldehyde is given under direction of surgeon on duty.

7 If the patient is depressed, or semi-conscious, administer strong, hot coffee. If markedly depressed or becoming unconscious, caffein or metrazole, carbon-dioxide-oxygen inhalation and external heat. In case of impending shock or coma, hypertonic dextrose solutions (10 per cent) intravenously; sodium bicarbonate solution for acidosis; continue bicarbonate by mouth after recovery from depression.

8 Temperature and pulse are taken every eight hours and oftener, if necessary.

9 Restraint must not be applied to patients unless for protection of patient and attendant. Any method of restraint should be ordered by surgeon on duty.

10 All unforeseen and unlooked for changes in condition of patient must be immediately reported to the surgeon on duty.

11 Clothing of all vermin infested patients must be carefullly wrapped and marked "Vermin Infested," and kept separately from other patients' clothing. Before patient dons such infested clothing, definite instructions should be given for delousing; namely, heat under pressure, or chemical treatment with sulphur anhydride, all done under competent supervision. Ordinary fumigation is of no avail. All vermin-infested patients must be given a hot bath, soaping thoroughly. Employees handling vermin-infested patients should carefully note their absence from infestation before proceeding home.

12 No steward or nurse shall administer any additional treatment without consulting the surgeon on duty.

13 In all cases of alcoholics held for police, the police must be notified before patient is discharged.

With reference to possible rehabilitation, the treatment other than custody under supervision which will prevent the affected individual's subjection to strain of any sort, particularly that of contact with alcohol or bibulously inclined friends, has proved universally unsatisfactory. Therefore, if custody under medical supervision such as the forbearance from alcohol, the correction of clinical physical findings, especially dietary and mental, and further scientific study of the psychopharmacologic aspects of alcohol and alcoholism offer the best opportunities for cure, then it is most important that it begin at once in institutions designed and equipped for this purpose.

In California today, many alcoholics are confined to prison cells for various periods of time, and often legally committed voluntarily or otherwise from there. In San Francisco, the system is to route such individuals through the Psychopathic Hospital division of the San Francisco Hospital of the Department of Health, where they are held for examination by the physicians of the Lunacy Commission (a group of four physicians appointed by the Judges of the Superior Court) and committed to a State institution, or discharged by a special Judge of the Superior Court. This system has been criticized because such patients have taken up over 40 per cent of the bed space in the hospital originally intended for psychopathic patients. It has been stated before that alcoholics should not be placed in a hospital or ward for psychotics, since they have an entirely different psychology which makes them incompatible.

The problem of the immediate care of alcoholics should be a relatively simple one. It would appear feasible that such cases to be committed, which have a definite psychosis or mental disturbance, should be sent to the Psychopathic Hospital Division of the San Francisco Hospital of the Department of Public Health. It would also appear feasible that such cases necessitating restraint and care should be confined to prison, examined there by the Lunacy Commission, and committed direct from the prison and by the special court. It is recognized, however, that such confinement in the City Prison should be in special cells designed for this purpose, and such inmates of these cells be kept under medical supervision. It would also appear feasible that many cases could be examined in their homes by the physicians of the Lunacy Commission and committed direct by the court.

Assembly Bill No. 2313, introduced before the State Legislature on January 22, 1937, but not enacted and referred to the Committee on Public Morals, is "an act for the care and treatment of inebriates, providing for the maintenance of hospitals and hospital facilities and for the admission

of inebriates thereto, and making an appropriation." The system in the State of California, however, has been subjected to criticism because these alcoholics are committed to psychopathic institutions. Through the cooperation of Harry Lutgens, Director of Institutions of the State of California, the following figures have been obtained, representing the number so committed in California during the last thirteen years:

ALCOHOLIC PATIENTS COMMITTED TO STATE HOSPITALS
1925-1937 (Fiscal Years)

Year Ending June 30	*Male*	*Female*	*Total*
1925	143	30	173
1926	177	30	207
1927	226	46	272
1928	241	46	287
1929	296	48	344
1930	294	47	341
1931	397	76	473
1932	334	66	400
1933	375	87	462
1934	498	135	633
1935	520	148	668
1936	668	202	870
1937	922	243	1165

Special Institutions for Alcoholics

Apparently, these cases are welcome in state psychopathic institutions, where they can be used very readily, after a few days of custodial care, in various types of positions within the institutions. From a social and economic standpoint this is recognized as an excellent procedure, but from the standpoint of the patient there is offered further criticism. The rehabilitation of alcoholics requires weeks, and it is considered by some authorities to be at least four months' time—if, indeed, they can be rehabilitated at all. Quite often, they are apt to be insubordinate and uncooperative, and therefore special institutions should be designed along a farm and work colony type. Two of these could be readily established in California: one in northern California, and one in southern California. The staff for such institutions must be carefully picked and must contain experts in psychology, and in vocational training, and in dietetics.

It is recognized, too, that this type of institution may not be self-supporting and, therefore, may be a further strain on the tax rate of the state. When one considers that there was paid in 1937 in the State of California[2] an excise tax on beverages of $1,889,079.34; a license fee for liquor of $5,699,354.28; distilled spirits excise stamp tax sales, $8,248,599.42; and a collection for fines of $85,871, along with a sales tax of 3 per cent on every dollar of liquor sold at retail—it is truly a "staggering" industry! One can readily understand that a portion of this tax could be devoted to the rehabilitation of alcoholics. Especially is this important since a large portion (40 to 60 per cent) of the license fee is distributed to cities and counties and used for various purposes, some of which are totally unrelated to liquor control. It is, of course, appreciated that each person so committed should have a complete social service examination and, if the patient or the family can afford to pay for the care, he should be charged the full cost at a per diem rate for that particular institution.

Summary

1 There is evidence that alcoholism, both acute and chronic, is definitely on the increase.

2 The temporary or emergency measures used in the treatment are insufficient.

3 The institution for the care and treatment of the psychopathic patient is not a suitable place for the alcoholics.

4 The fact that alcoholic patients are able to work after a few days of custodial care suggests the desirability of a farm and work colony.

5 These institutions would not be self-supporting and a method of obtaining a source of revenue from the liquor tax is suggested.

6 The need of further experimental work with this type of patient is recommended.

[1]Newman, Henry; and Card, John: Duration of Acquired Tolerance to Ethyl Alcohol. Jour. Pharmacol. & Exper. Ther., 59:249 (March) 1937.

[2]Alcohol Beverage Control Bulletin: Calif. State Board of Equalization: Vol. 3, No. 1—1938 (January).

Appendix

Method for the Determination of Drunkenness

The following definition of drunkenness is proposed: A drunken person is one who has taken alcohol, or alcoholic beverages, in sufficient amount to show evidence of alcoholic intoxication, so as to render him unfit or undesirable for, and inefficient in, the performance of his present or regular occupation, thereby endangering himself and others.

It is suggested that the criteria of drunkenness should be (1) demonstrable symptoms of alcoholism, as revealed by physical examination, and (2) evidences of sufficient alcohol as indicated by quantitative tests for alcohol in the urine or respired air. Since either criterion alone will not

suffice to establish drunkenness, in the medico-legal sense, and in the present connection, the results of the two tests should be correlated. It should be appreciated that alcohol occurs normally in the physiological economy, being increased after meals; the concentration may be as much as 0.003 per cent in urine, somewhat less in blood and cerebrospinal fluid. This "normal alcohol" has no significance for alcoholic intoxication, except that it points to the necessity of making quantitative estimations of alcohol in order to establish drunkenness, the physical sign of which should be simultaneously demonstrated.

Probably for the best results, the physical examination should be conducted by, or under the supervision of, a physician, and the chemical tests by a chemist or pharmacist of moderate attainments. In the event of the unavailability of a chemist or pharmacist, a person of good intelligence, responsibility and a color-sense, such as a hospital orderly or police officer, could apply the proposed chemical tests. Naturally, some preliminary practice of the methods would be necessary, a matter which could be supervised by the City Chemist, who also could be responsible for supplying the comparatively simple equipment and chemical reagents necessary for the tests.

Estimation in Urine. One cc. of the subject's urine is placed in a small test-tube joined in another test-tube containing 5 cc. of the dichromate-sulphuric acid reagent used for the breath, immersed in a hot water-bath, and air is bubbled through the system for 10 minutes. The resulting color is matched as above, and the concentration of alcohol in the urine is calculated. The amounts of alcohol in the total volume (2 L.) of respired air and in 1 cc. of urine should be nearly the same. In most cases, the urine-test alone will suffice, but if urine cannot be voided or obtained, the respired air should be tested.

If the presence of acetone be suspected (diabetic coma) the current passing through the respired air or urine should be bubbled through a test-tube containing Scott-Wilson solution* before bubbling the stream through the dichromatic-sulphuric acid mixture.

The drawing by the subject of Purves-Stewart's figure is suggested as a physical test; this would reflect efficiency of central nervous coordination and control. The subject is asked to draw on paper a likeness of the figure submitted, which consists of a square with diagonals inside a circle. The figure is as follows—and hereinafter is designated P-SS. The physical examination of the subject is made by a physician or a qualified person, as indicated above.

*This solution contains silver mercuric cyanide. For preparation of this solution, consult Morse's "Applied Biochemistry," 1927, p. 888.

The correlations of the physical signs and symptoms of alcoholic intoxication and the concentration and amounts of alcohol in urine or respired air are about as follows:

Per Cent Concentration in Urine	*Amount in 1 cc. Urine or 2 L. Respired Air* mgm.	*Signs, Symptoms and Diagnosis*
0.1	1	None; not intoxicated, but as low a concentration as 0.01% may mean that alcohol has been taken recently..... .....Not drunk
0.1-0.2†	1-2	Marked odor of alcohol on breath, dilated pupils, present or absent, flushed face, loss of self-restraint (loud boisterous speech, reckless boasting and profanity) increased aggressiveness; loss of sense of responsibility; P-SF doubtful; intoxicated .....Drunk
0.2-0.3**	2-3	Same as above, but increased; evidence of unbalanced equilibrium; P-SF negative; definitely intoxicated ....Definitely drunk
0.3-0.4	3-4	Loss of equilibrium (swaying, speech not clear), additional to above symptoms; P-SF negative; advanced intoxication .....Very drunk
0.4-0.5	4-5	Pupils constricted and unequal, slow shallow respiration, unable to stand up, unconsciousness or coma; P-SF negative; pronounced intoxication; possibly fatal..... .....Dead drunk
0.8-1.0	8-10	Same as above, but pupils dilated; deep coma; P-SF negative; probably fatal..... ..... Dangerously drunk

†This concentration indicates the consumption of about 30 to 35 cc. (1 oz.) of alcohol one hour previous to the test (Liebesny, 1928).

**This concentration indicates that the subject may have consumed 96 cc. (3 ozs.) of alcohol, or the equivalent of about 235 cc. (nearly 1 pint) of whiskey or about 1,920 cc. (nearly 2 quarts) of beer 1½ hours before the test (Evans and Jones, 1929).

It is recommended that the proposed physical and chemical tests be given a trial for three months, proper records of results kept, and a final decision on the adoption of the tests be made at the end of that time, provided sufficient data are at hand.

We have not considered methyl alcohol poisoning in this recommendation, because as far as

we know it is of comparatively minor importance in emergencies such as here discussed.

Alcohol in Urine and Blood

URINE

Ten cubic centimeters urine plus 10 cc. water and distill, collecting the first 10 cc. of distillate and mix. In separate tubes similar to tubes used in standards, place 1 cc. in one and smaller measured amounts in the other, making the volume up to 1 cc. in each case. Add 3 cc. of the $K_2Cr_2O_7$ reagents to each tube and place in boiling water bath four minutes. Compare colors with those of the standard scale, divide the reading by the fraction of a cc. of distillate used, which gives percentage of alcohol by weight.

If results are too low to be read, use the weak standards using 2 cc. of the distillate and known smaller amounts, bring the volume to 2 cc. in each case, add 1 cc. of reagent and place tubes in boiling water twelve minutes.

BLOOD

If blood is being tested, take 2 cc. of whole blood, plasma, or serum, add 20 cc. of water (containing about 0.8 grams of sulpho-salicylic acid) and collect 10 cc. of the distillate. This is tested on the weak standard scale and the result multiplied by 5.

A 500 cc. distilling flask and condenser may be used. No special apparatus is necessary.

Table 1

STRONG PERMANENT STANDARDS

Per Cent Alcohol by Weight	*Alcohol by Weight*	*Water*
		cc.
0.0	.....	1.00
0.05	0.50 cc. of 0.10 per cent	0.50
0.10	1,00 cc. of 0.10 per cent	0.0
0.12	0.60 cc. of 0.20 per cent	0.40
0.14	0.70 cc. of 0.20 per cent	0.30
0.16	0.80 cc. of 0.20 per cent	0.20
0.18	0.90 cc. of 0.20 per cent	0.10
0.20	1.00 cc. of 0.20 per cent	...
0.22	0.73 cc. of 0.30 per cent	0.27

To each tube add 3 cc. N/15 $K_2Cr_2O_7$ (0.33 per cent in 50 per cent H_2SO_4). Place tubes in boiling water four minutes and seal.

Table 2

WEAK PERMANENT STANDARDS

Per Cent Alcohol by Weight	*Alcohol by Weight*	*Water*
		cc.
0.0	.....	2.0
0.005	1.0 cc. of 0.01 per cent	1.0
0.010	2.0 cc. of 0.01 per cent	0.0
0.013	0.52 cc. of 0.05 per cent	1.48
0.016	0.64 cc. of 0.05 per cent	1.36
0.019	0.76 cc. of 0.05 per cent	1.24
0.022	0.88 cc. of 0.05 per cent	1.12
0.025	1.00 cc. of 0.05 per cent	1.00
0.028	1.12 cc. of 0.05 per cent	0.88
0.031	1.24 cc. of 0.05 per cent	0.76
0.034	1.36 cc. of 0.05 per cent	0.64
0.037	1.48 cc. of 0.05 per cent	0.52
0.040	1.60 cc. of 0.05 per cent	0.40

Add 1 cc. $K_2Cr_2O_7$ reagent to each tube. Place tubes in boiling water bath twelve minutes.

Publicity for National Hospital Day

Printed material is available as an aid to the hospital in preparing its publicity for Hospital Day, May 12, this service includes: posters in colors, publicity folders and booklets, invitation post cards, N.H.D. letterheads, auto bumper signs, blotters, button and ribbon badges, tray folders, movie trailers, gummed stickers for mail, newspaper mats, lead pencils, hospital bulletins, books for children. *Physicians' Record Co., 161 W. Harrison St., Chicago, Illinois,* will send literature and samples on request.

The production of anesthesia is a more ancient art than the majority of people imagine. The layman, if questioned on its antiquity, would probably suggest that it dates from the discovery of chloroform, but certain civilizations seem to have been conversant with at least some methods for producing anesthesia through the ages back towards prehistoric times. One of the first accounts of human happenings in the Bible is the putting of Adam into a deep sleep for the purpose of extracting the rib for the creation of woman. It is no exaggeration to say that ever since then man has been deeply interested in the production of a state of unconsciousness sufficiently deep to lose all sense of pain.

To come to actual instances of the early practice of anesthesia, the Chinese doctor, Hao Tho (about 230 B. C.), both performed operations and anesthetized his patients previously by administering a hemp preparation—Ma-Yo—capable of producing the necessary depth of anesthesia in a few minutes. It has taken the Western world something over 2,100 years to arrive at a state of efficiency in the devising and administering of anesthetics comparable to that of Hao Tho.

C. H. Sykes, Ph.C., M.P.S.,
Lecturer in Pharmacy, London Hospital Medical College, in *The Hospital,* February, 1938

The House of Delegates of the American Hospital Association

Election of Delegates and Alternates

THE various states and provinces are arranging for the election of their members to the House of Delegates of the American Hospital Association. Two states have officially reported their elections.

California, which is entitled to two delegates and two alternates, has elected the following:

Delegates—
Ellard L. Slack, Samuel Merritt Hospital, Oakland
Alice G. Henninger, Hunting Memorial Hospital, Pasadena

Alternates—
A. C. Jensen, Fairmont Hospital, San Leandro
R. E. Heerman, California Hospital, Los Angeles

Kentucky, which is entitled to one delegate and one alternate, has reported the election of—

Delegate—H. L. Dobbs, Kentucky Baptist Hospital, Louisville

Alternate—Adeline M. Hughes, R.N., Jewish Hospital, Louisville

The Executive Secretary of the Association is sending official notices of the election to the personal and institutional membership in the various states just as rapidly as this office is being notified of the time and place of the election.

The committees having the election in charge for the various states and provinces have been voted and are as follows:

House of Delegates

Committees Selected to Conduct Meetings for Election of Delegates and Alternates

Alabama
Chairman—Mrs. Jewell W. Thrasher, R.N.
Secretary—C. L. Sibley
Sister Joseph Mary, R.N.
Meeting—April 7-9, Birmingham

Arizona
Chairman—C. G. Salsbury, M.D.
Secretary—Karl F. Barfield

Arkansas
Chairman—Regina H. Kaplan, R.N.
Secretary—Lee C. Gammill
Eva Atwood, R.N.
Meeting—May 16-17, Ft. Smith

California
Chairman—E. L. Slack
Secretary—A. C. Jensen
Alice G. Henninger, R.N.
Meeting—March 3, San Francisco

Colorado
Chairman—Herbert A. Black, M.D.
Secretary—William S. McNary
Sister Ambrosina

Connecticut
Chairman—Oliver H. Bartine
Secretary—B. Henry Mason, M.D.
Frances P. West, R.N.
Meeting—May

Delaware
Chairman—A. V. Gilliland, M.D.
Secretary—C. A. Hume
James S. Stirling

District of Columbia
Chairman—Lewis H. Taylor, M.D.
Secretary—Francis J. Eisenman, M.D.
Frances W. Hall

Florida
Chairman—J. H. Holcombe
T. F. Alexander
Katharine A. Moyer
Meeting—April 7-9, Birmingham, Alabama

Georgia
Chairman—W. D. Barker
Secretary—George R. Burt
Ellen Westover

Idaho
Chairman—Jacob H. Trayner
Secretary—Emily Pine, R.N.
Mrs. Freda Consigny, R.N.

Illinois
Chairman—Paul H. Fesler
Secretary—Charles A. Lindquist
Mrs. Edna H. Nelson, R.N.
Meeting—May 4-6, Chicago

Indiana
Chairman—Albert G. Hahn
Secretary—Gladys Brandt, R.N.
Sister Rose, R.N.
Meeting—May 4, Chicago

Iowa
Chairman—F. P. G. Lattner
Secretary—R. A. Nettleton
Sister Mary Rose, R.N.
Meeting—March 29, Burlington

Kansas
Chairman—H. R. Wahl, M.D.
Secretary—A. R. Hatcher, M.D.
Dorothy H. McMasters, R.N.

Kentucky
Chairman—Lake Johnson, R.N.
Secretary—Adeline M. Hughes, R.N.
Florence Mayfield, R.N.
Meeting—March 8, Louisville

Louisiana
Chairman—Louis J. Bristow
Secretary—A. J. Hockett, M.D.
Mrs. Idell B. Stafford
Meeting—May 2, New Orleans

Maine
Chairman—Stephen S. Brown, M.D.
Secretary—Miriam L. Dow
Sister Mercure

Maryland
Chairman—Clyde D. Frost, M.D.
Secretary—P. J. McMillin
Mary L. Nies, R.N.

Massachusetts
Chairman—Charles F. Wilinsky, M.D.
Secretary—Eugene Walker, M.D.
Edna Price, R.N.

Michigan
Chairman—Donald M. Morrill, M.D.
Secretary—John Gorrell, M.D.
Mary E. Skeoch, R.N.
Meeting—June 23-24, Marquette

Minnesota
Chairman—John H. Mitchell
Secretary—Rev. L. B. Benson
Catherine H. Allison, R.N.
Meeting—May 19, Minneapolis

Mississippi
Chairman—Leon S. Lippincott, M.D.
Secretary—J. Gould Gardner, M.D.
Helen Branham
Meeting—April 18, Jackson

Missouri
Chairman—E. E. King
Secretary—L. C. Austin
T. J. McGinty

Montana
Chairman—Monta Bane, R.N.
Secretary—Ann Beckwith, R.N.
Sister Gaudentia, R.N.

Nebraska
Chairman—Francis J. Bean, M.D.
Secretary—Rev. Harry E. Hess
Ida Sommer, R.N.
Meeting—March 30, Lincoln

New Hampshire
Chairman—Mary L. Whittaker
Donald S. Smith
M. Gladys Larrabee, R.N.

New Jersey
Chairman—F. Stanley Howe
Secretary—Earl H. Snavely, M.D.
Eleanor E. Hamilton, R.N.
Meeting—June 3, Jersey City

New Mexico
Chairman—Miss Beulah R. Burtch
Secretary—Sister Marie Genevieve
Meeting—May, Roswell

New York
Chairman—Carl P. Wright
Secretary—James U. Norris
M. Marion Smith
Meeting—May 19, Buffalo

North Carolina
Chairman—Sample B. Forbus
Secretary—Newton Fisher
Mrs. W. M. Vaughan, R.N.
Meeting—April 13, Pinehurst

North Dakota
Chairman—J. T. Tollefson
Secretary—Iver H. Iverson
Anna R. Skeim, R.N.

Ohio
Chairman—Fred G. Carter, M.D.
Secretary—N. N. Wood, M.D.
Margaret R. Parker, R.N.
Meeting—April 6, Columbus

Oklahoma
Chairman—Mrs. D. I. Browne McNulty
Secretary—R. L. Loy, Jr.
Florence M. Worley, R.N.

Oregon
Chairman—A. L. Richardson, M.D.
Secretary—C. H. Manlove, M.D.
Dora Shaffer

Pennsylvania
Chairman—Howard Bishop
Secretary—G. Walter Zulauf, M.D.
Jessie J. Turnbull, R.N.
Meeting—April 28, Pittsburgh

Rhode Island
Chairman—Harmon P. B. Jordan, M.D.
Secretary—William O. Rice
Helen M. Blaisdell, R.N.

South Carolina
Chairman—F. Oliver Bates
Secretary—H. H. McGill
Mrs. Byrd B. Holmes, R.N.
Meeting—April

South Dakota
Chairman—Rev. C. M. Austin
Secretary—Mabel O. Woods, R.N.
Mrs. Edna Jones

Tennessee
Chairman—Henry Hedden, M.D.
Secretary—Eugene B. Elder, M.D.
Clarence P. Connell
Meeting—April 8, Birmingham

Texas
Chairman—Robert Jolly
Secretary—Margaret E. Kennedy, R.N.
Mrs. Martha P. Roberson, R.N.
Meeting—April 8, Houston

Utah
Chairman—Harold S. Barnes
Secretary—R. J. Alexander, M.D.
Mrs. Olive V. Wardrop
Meeting—March

Vermont
Chairman—Thomas S. Brown, M.D.
Secretary—Anna L. S. Richardson

Virginia
Chairman—Lewis E. Jarrett, M.D.
Secretary—O. K. Fike
Charlotte Pfeiffer
Meeting—April 15, Columbia, South Carolina

Washington
Chairman—Clarence J. Cummings
Secretary—Herina I. Eklind
Meeting—April 9, Seattle

West Virginia
Chairman—J. Stanley Turk
Secretary—Benjamin I. Golden
Mrs. Grace M. Short, R.N.

Wisconsin
Chairman—Dr. Herm L. Fritschel
Secretary—Joseph G. Norby
Margaret W. Johnson, R.N.
Meeting—May 4, Chicago

Wyoming
Chairman—Mrs Bessie K. Haskin
Secretary—James G. Allison, M.D.

Canada

Alberta
Chairman—A. F. Anderson, M.D.
Secretary—R. T. Washburn, M.D.
A. E. Archer, M.D.

British Columbia
Chairman—A. K. Haywood, M.D.
Secretary—E. J. Ryan, M.D.
H. S. Stalker, M.D.

Manitoba
Chairman—George F. Stephens, M.D.
Secretary—G. S. Williams, M.D.
Catherine M. McLearn

New Brunswick
Chairman—S. R. D. Hewitt, M.D.
Secretary—R. J. Collins, M.D.
A. J. MacMaster

Nova Scotia
Chairman—Anne Martin, R.N.
Secretary—Sister Mary Jovita, R.N.
Sister M. Ignatius, R.N.

Ontario
Chairman—A. J. Swanson
Secretary—F. W. Routley, M.D.
E. M. McKee

Quebec
Chairman—W. R. Chenoweth
Secretary—W. H. Delaney, M.D.
J. C. Mackenzie, M.D.

Saskatchewan
Chairman—H. H. Mitchell, M.D.
Secretary—J. S. Williams

The Election of the Delegates and Alternates

The personal membership and the representatives of the institutional membership in each state and province may vote either in person or by proxy.

The headquarters office is sending a proxy form to each personal member and each institutional member which may be filed with the chairman of the committee or any other person whom the member may select for his representative at the election. Twenty-five per cent of the personal membership and representatives of the institutional membership in each state and province must be represented at the election in order that it may be legal.

During the months of April and May, many of the states and provinces will hold their annual conventions, and an increasing number of the members of the House of Delegates and their alternates will be elected. The association is very desirous of having the full roster of the membership of the House of Delegates completed well in advance of the date of the Dallas Convention, September 26-30.

It will be greatly appreciated if the chairmen of the committees who have been appointed for the respective states and provinces will forward to the executive secretary a notice of the time and place of holding the election at the earliest possible date.

Western Institute for Hospital Administrators

Palo Alto Campus, Stanford University, August 8 to 19, 1938

THE program for the Western Institute for Hospital Administrators, sponsored jointly by the American College of Hospital Administrators, the Association of Western Hospitals, and the Association of California Hospitals, in cooperation with Stanford University, has just been announced. This institute will be held at the Stanford University Campus, Palo Alto, California, August 8-19, 1938.

The program is of vital interest to all administrators in the West Coast area. Problems of fundamental importance in the hospital field will be discussed by a faculty representing national leaders and outstanding persons in their fields. Field trips and clinical demonstrations will be arranged in the leading institutions of the area to provide opportunities for observation of the necessary practical aspects of administrative techniques. Insofar as possible, these trips and demonstrations will be planned to meet the individual administrator's needs. The panel discussions to be conducted allow students to bring up points of personal and general interest. The whole program is centered around the individual administrator's day to day program and is designed to bring to his attention the fundamental relationships involved and the scientific progress achieved in dealing with his problems.

Program

Hospitals' Contribution to Medical Education
President Ray Lyman Wilbur, M.D.
Stanford University, Palo Alto, California

Relation of Hospitals to Public Health
Jacob C. Geiger, M.D., Commissioner of Health
San Francisco Dept. of Public Health

Fundamentals of Hospital Organization
James A. Hamilton, First Vice-President
American College of Hospital Administrators

Medical Staff Organization and Relationships
B. W. Black, M.D., Second Vice-President
American College of Hospital Administrators

Financial Support and Control of Hospitals
C. Rufus Rorem, Ph.D., C.P.A.
American Hospital Association

Nursing Education and Nursing Service
Sister John Gabriel, Hospital Consultant and Educational Director, Sisters of Charity of Providence, Seattle, Washington

Structural Rehabilitation, Maintenance, and Operation
A. K. Haywood, M.D., Vancouver General Hospital, Vancouver, British Columbia

Medical Social Service
Margaret Spiers, Alameda County Hospital
Oakland, California

Food Service
Mrs. Lucille Waite
Fairmont Hospital, San Leandro, California

Administrative Aspects of Roentgenology, Pathology, and Special Therapy Departments
Robin C. Buerki, M.D., President-Elect
American College of Hospital Administrators

Medico-Legal Problems
Hon. Howard Burrell
Los Angeles, California

Medical Records
Malcolm T. MacEachern, M.D., Associate Director American College of Surgeons

The institute will be directed by Benjamin W. Black, M.D., Chairman of the Advisory and Administrative Committees. Members of the Advisory Committee are:

Honorary Chairmen:
Ray Lyman Wilbur, M.D., President
Stanford University, Palo Alto, California

Howard E. Bishop, President
American College of Hospital Administrators, Sayre, Pennsylvania

Andrew C. Jensen, President
Association of Western Hospitals
San Leandro, California

R. D. Brisbane, President
Association of California Hospitals
Sacramento, California

B. W. Black, M.D., Director, Chairman
Alameda County Institutions
Oakland, California

Clarence J. Cummings, Admstr.
Tacoma General Hospital
Tacoma, Washington

Malcolm T. MacEachern, M.D., Associate Director
American College of Surgeons, Chicago

Ellard L. Slack, Admstr.
Samuel Merritt Hospital
Oakland, California

Rev. R. T. Howley
Catholic Charities, San Francisco

J. O. Sexon, Supt.
Good Samaritan Hospital
Phoenix, Arizona

Ralph W. Nelson, Supt.
Portland Hospital and Sanitarium
Portland, Oregon

H. S. Barnes, Supt.
Latter Day Saints Hospital
Salt Lake City, Utah

J. W. Baldwin, Supt.
Montana Deaconess Hospital
Great Falls, Montana

A. K. Haywood, M.D., Gen. Supt.
Vancouver General Hospital
Vancouver, British Columbia

Ritz E. Heerman, Supt.
The California Hospital
Los Angeles, California

J. V. Buck, Admstr.
St. Luke's Hospital
Spokane, Washington

Alice G. Henninger, Admstr.
Collis P. and Howard Huntington Memorial Hospital, Pasadena, California

Emily Pine, Supt.
St. Luke's Hospital and Nurses' Training School Ltd., Boise, Idaho

The Administrative Committee, under the chairmanship of Dr. Black, comprises:

E. W. Erwin, Controller, Stanford University

Ellard L. Slack, Admstr.
Samuel Merritt Hospital, Oakland, California

W. P. Butler, San Jose Hospital, San Jose, California

Stanford University is ideally located and conducive to study at its best. Situated in Santa Clara Valley, thirty miles southeast of San Francisco, and patterned after old Spanish missions of California and Mexico, Stanford University offers every facility desirable for the conduct of an institute. The countless attractions of the surrounding country assure students of interesting, worthwhile hours of leisure.

At Lagunita Court, one of the University dormitories, housing facilities may be obtained at the rate of $1.50 a day for single rooms. Meals may be had a la carte or table d'hote at the Stanford Union at the nominal charge prevailing for faculty and students of the university.

The institute will be open to the following type of hospital personnel actively engaged in administrative work:

Hospital Administrators
Administrative Assistants
Executive Department Heads

Further information may be obtained from the office of the Executive Secretary, Association of Western Hospitals, 1182 Market Street, San Francisco, California.

E. B. Tribbet

Everyone connected with the laundry and cleaning industries will regret deeply to learn of the passing on Monday, February 21, 1938, of E. D. Tribbet, treasurer of the American Laundry Machinery Company. Mr. Tribbet died in his seventy-third year, in a Cincinnati hospital, after only a short illness.

Born in Greenfield, Ohio, in 1865, Mr. Tribbet was one of the earliest pioneers in the laundry machinery field. During the World War, Mr. Tribbet was one of those in charge of the Laundry Division of the Quartermaster's Corps of the United States Army.

Mr. Tribbet is survived by his widow, Mrs. Josephine Van Nostrand Tribbet, and one brother, Lemuel H. Tribbet, of Westboro, Ohio, to whom the sincere sympathy of his many friends in the hospital field is extended.

Axel M. Green, D.D.

Dr. Axel M. Green, superintendent of the Emanuel Hospital, Portland, Oregon, died March 5, following an illness of several weeks. Dr. Green was born in Sweden and came to the United States in his youth. He was graduated from Gustavus Adolphus College, St. Peter, Minnesota, and Augustana Theological Seminary, Rock Island, Illinois. Appointed superintendent of Emanuel Hospital in 1918, Dr. Green held this post until the time of his death. He was active in state hospital work and was a member of the American Hospital Association since 1926.

The annual meeting of the American Association of Industrial Physicians and Surgeons will be held concurrently with the Midwest Conference on Occupational Diseases at the Palmer House, Chicago, June 6 to 9, 1938.

Among the Associations

State and Province Association News

The Twelfth Annual Convention of Association of Western Hospitals and the Fourteenth Annual Meeting of Western Conference of the Catholic Hospital Association

The convention of the Association of Western Hospitals and the Western Conference, Catholic Hospital Association, held in the Hotel Fairmont, San Francisco, February 28 to March 3, inclusive, was the most successful from the standpoint of attendance, interest, and excellence of programs in the history of the conventions of these two organizations. More than two thousand hospital people, administrators, members of boards of trustees, medical staffs, nurses, and other personnel, were assembled in San Francisco to attend the various sessions. They brought together not only those who direct and support the hospitals of the Pacific Coast and the mountain states, but many from other sections of the United States and Canada as well.

The two high objectives of convention were:

Adequate hospitalization for all who need such service, regardless of their financial condition.

Adequate protection to the hospitals which give such service.

Not only were these objectives energetically—even aggressively—pursued, but in every other respect the convention went over and above the usual and customary temporary expediencies that mark almost every convention of whatever type, and plotted the long pull ahead—hospital regimen, hospital management, and hospital policy as it should be ten, fifteen, twenty years from now. The convention program fell naturally into its announced sub-divisions—costs, management, personnel, policy, and future course of action.

The convention left the very definite impression of a job well done. It brought some burning issues out into the light for the first time in a gathering of this sort—colonies for alcoholics and epileptics, diversion of a portion of the gasoline tax to the smaller hospitals lacking public support as a result of the increase in highway automobile accidents, drastic police action against highway accident and other patients who flee their hospital bills, a proper public comprehension of the scourge of venereal disease; and it attacked these problems in forthright fashion. In addition it again hammered effectively at some old issues, hospital sponsorship of group insurance, hospital opposition to the throwing open of tax-supported sanitoria to all classes and to the establishment of preferred cost schedules for powerful corporations, groups and individuals.

A firm guarantee that the hospitals will carry on in this new policy of studied and cautious, but nevertheless aggressive progress, was given in the elections. A. C. Jensen, incoming president, superintendent of the Fairmont Hospital, Oakland, and Harold S. Barnes, president-elect, administrator of the Latter Day Saints Hospital, Salt Lake City, assure the future of this policy for the Association of Western Hospitals. It was to be regretted that Sister Cecilia, the incoming president of the Western Conference, Catholic Hospital Association, was not present, as she was unavoidably detained in San Diego, but she will make her official presence felt in the same effective manner as her beloved predecessor, Sister Mary Hildegarde, of St. Mary's Hospital, San Francisco. In R. D. Brisbane, director of the Sutter Hospital, Sacramento, the Association of California Hospitals has a particularly helpful leader. Mr. Brisbane is in a strategic position to attend to the deliberations affecting hospitals in the 1939 session of the California Legislature, and some of these deliberations will need a champion of his stripe.

William P. Butler, San Jose Hospital, named as president-elect of the California Hospital Association, and Rev. Richard T. Howley, assistant director of Catholic Charities in San Francisco, as first vice-president, are two other outstanding leaders. Equal recognition must be given to the other officers elected, the convention committee chairmen and the section leaders, but the list is too long to stand repetition here.

The keynote of the convention was delivered by Dr. Malcolm T. MacEachern, associate director of the American College of Surgeons, when he said in the first day session:

"The hospital administrator must assure every person in the community competent, scientific care through having an institution so set up that

H. S. Barnes, President-Elect, Association of Western Hospitals

it can guarantee such treatment. The hospital administrator must see that every man, woman, and child coming to its doors, regardless of race, color, creed, or social status, secures proper medical care in his institution or elsewhere."

All of the deliberations of the convention were closely collateral to the ideals expressed by Dr. MacEachern. It would be hard to say who expressed those ideals the most convincingly. Robert E. Neff, president of the American Hospital Association, touched them closely in some of his remarks in one of the second day sessions, when, in a discussion of group hospitalization, he said:

"The hospitals are taking care of the wealthy on the one hand and the indigents on the other, but the middle class is being more or less neglected in this particular. Group hospitalization provides this care for the white collar class. It paves the way for equitable service to all classes of society, and makes finances a secondary consideration."

The convention kept close to schedule. The beautiful and impressive ceremonies prior to the opening of the convention, the Mass, Coram Pontifice in St. Mary's Cathedral, was well attended and was marked particularly by the beautiful singing of the student nurses choir. Most Rev. John Mitty, D.D., Archbishop of San Francisco, presided, and Rt. Rev. Monsignor Charles A. Ramm was the celebrant. The family dinner for the officers of the Association of Western Hospitals at the Fairmont Hotel was a feature event. Dr. Glenn Myers, the retiring president, was toastmaster.

The Monday session was all business, with the first general assembly, the annual meeting of the California Association, the first session of the Western Conference, Catholic Hospital Association, the board business meeting of the councillors of the Association of Western Hospitals, and the meeting of the purchasing agents section. It also marked the first extra-convention event, an address before the Kiwanis Club of Oakland by Dr. MacEachern on "The Fourteenth Kiwanian." In this group of meetings the associations got squared away for the year's work and made way for the more public deliberations to follow.

On Tuesday the convention launched into the first of its major problems, the increased cost of hospitalization. Mrs. Gertrude R. Folendorf, director of the Shriners' Hospital for Crippled Children, San Francisco, added considerable zest and spirit to this session when she came out with a strong advocacy of union labor as a proper safeguard for the workingmen, but stated that the organization of nurses along union labor lines, because of the nature of their work, was out of the question. The venereal disease issue was introduced into the convention on this day, with a talk by Dr. Malcolm H. Merrill, chief of the bureau of venereal disease, California State Department of Public Health, before the Public Hospital Section. It was a day of high lights, but few of which can be recorded here. It closed with the annual dinner of hospital trustees; presided over by Dr. Ray Lyman Wilbur, president of Stanford University, and was addressed by Mr. Neff and by Galen M. Fisher, high executive of the Institute of Pacific Relations.

Increased costs, personnel problems, and the annual banquet were the business and social issues on Wednesday, the third day of the convention, when the big meeting swung back more or less to further discussion of internal problems. The

A. C. Jensen, President, Association of Western Hospitals

issue of general public admission to tax supported hospitals was a feature of this day, however, Dr. B. W. Black, administrator of Alameda County institutions, stating clearly and concisely just what this would mean to the private institutions, and called attention to clean cut legislative enactments barring the tax supported hospitals to those who are able to pay in the private institutions. The importance of this issue transcended one day's deliberation, however, and it was to be taken up anew in the meeting on the closing day.

On Wednesday also, the issues on which the newspapers had more or less centered, isolated colonies for alcoholics and sequestered treatment for epileptics, were discussed. Dr. J. C. Geiger, health officer of San Francisco, and Dr. Robert E. Wyers, of the Pacific Colony, Spadra, handled these topics, respectively, in convincing fashion. The nurses, the volunteer workers and the record librarians also had their innings on this day with vital discussions regarding present and future plans.

The annual convention banquet in the evening utilized both the big Terrace ballroom and the famous Fairmont plunge. Dr. Myers again presided, with Harold J. Boyd, controller of the City of San Francisco, as master of ceremonies. At this event the group insurance issue was introduced by Harold Haas, assistant insurance commissioner for the State of California, who announced the formation of the Southern California hospital service plan. This plan provides hospital insurance for employed groups of five or more at rates of approximately three cents a day for each individual, five cents a day for husband and wife and seven cents a day for the entire family. The introduction of this plan in corporate form has already given considerable impetus to the whole group insurance movement in the southland, Haas explained.

The live topic of group insurance again occupied much of the attention of the convention on the closing day, and on this day one of its leading advocates in the United States was heard, in the person of E. A. van Steenwyk, director of the Minnesota Hospital Service Association, St. Paul. Mr. van Steenwyk told just why more than a million and a half employed persons have become members of responsible, hospital sponsored group hospital plans in the past five years. Mr. Brisbane discussed the issue from the standpoint of the hospital and Dr. J. H. Shepherd of San Jose from the standpoint of the physician.

Cancer, its treatment and its control, was another outstanding issue on closing day, with Dr. Alson R. Kilgore of San Francisco prospecting the future outlook. He was forced to confess that it was not a very rosy one; that little can be expected in the way of cure "discoveries," and that radiation and surgery will continue to be the chief reliance of the cancer patient and practitioner. The organization of a hospital formulary for the pharmacy, record room problems, engineering problems, were other subjects discussed in section meetings, and the final general assembly, fittingly enough, gave itself over to a discussion of hospital legislation.

In this last discussion the convention threw up its most formidable defensive bulwarks. Both Dr. Junius Harris, noted Sacramento practitioner, and Attorney E. A. Heafey, of Oakland, charged the convention and the hospitals to keep a close watch for legislative attack, particularly the type that would make the tax supported hospitals free-for-alls, and that would open them likewise to cultists and others who would utilize them for demonstrations of their own peculiar medical faiths. R. E. Heerman, administrator of the California Hospital, Los Angeles, reviewed the legislation of the future, and a summary was given by Dr. Harris.

The convention heard special addresses by Brother Leo, the distinguished and eloquent former chancellor of St. Mary's College; by Dr. Ray Lyman Wilbur, and by Mr. Galen Fisher, already mentioned. Special events included trips over Chinatown and the bay bridges, shopping tours and many happy, informal parties, both inside and outside the convention hotel.

"Time marches on and the hospitals have come a long way from that day when they were cold, gloomy, stone-walled barrack-like structures and characterized by the poet Browning as 'that sad house that helps the poor to die.'" So said Dr. A. S. Keenan of Mary's Help Hospital, San Francisco, in addressing one convention meeting.

New England Hospital Association Meets

From 1921 to 1938 is a short span of seventeen years. That these years have been fruitful, and the interest of the founders of the Association well based, became apparent when the Association met for its sixteenth annual meeting. The membership has grown from 93, the number present at the first meeting, to 315 personal members.

Six hundred and forty-one members and friends registered, while estimates indicate that in all probability closer to a thousand persons attended

the various sessions and inspected the booths of the exhibitors. The interest of the members and friends became apparent as the days continued. Administrators accompanied by members of their Boards of Trustees visited the exhibits and took an active interest in the sessions.

The program arranged produced one of the most instructive and informative meetings that the membership has had since its inception. Many of the papers presented will be found elsewhere in this issue of *HOSPITALS*. The Round Tables were ably conducted. The deliberations of the members can be well indicated by the following resolution which was passed:

"BE IT RESOLVED, That the New England Hospital Association meeting in convention endorses the work of the Committee on Simplification and Standardization of Furnishings, Supplies, and Equipment of the American Hospital Association and of the Division of Simplified Practice, National Bureau of Standards, United States Department of Commerce, in their activities in the past and plans for future simplified standards, and earnestly recommends that a *Manual of Standards* be published by the United States Department of Commerce in cooperation with the American Hospital Association of those standards which have already been approved and completed and which are of direct interest to hospitals, sanatoriums and institutions for the care of patients."

Further evidence of interest was made manifest in the Trustees Section when the session was brought to a close by the chairman, Frank O. Robson, chairman of the Board of Trustees, Harrington Memorial Hospital, Southbridge, Massachusetts, only ten minutes before the luncheon, at which both the president and executive secretary of the American Hospital Association were guests of honor.

At this luncheon, in addition to the president and the executive secretary of the American Hospital Association, there were at the head table the following members of the New England Hospital Association who are all past presidents of the American Hospital Association: John M. Peters, M.D.; F. A. Washburn, M.D.; Joseph B. Howland, M.D.; N. W. Faxon, M.D.

"Gadgets," an idea developed at the 1937 meeting, was extended this year. Although the number of gadgets presented were not as extensive as the year previous, those presented were selected with greater care and presented in better fashion. Our idea has borne good fruit and proven of value to our membership.

On the morning of the closing day there was presented a play entitled "Presenting Your Hospital." This play had been written and developed by the personnel of the Salem Hospital, Salem, Massachusetts. The play had originally been presented by the hospital in its program of community education. Various members of the personnel of the hospital took the part of the cast and did a job of acting much better than would be expected from amateurs. The script of the play is available for those who might be interested in its presentation.

The commercial exhibits in the adjoining halls at the hotel presented to the hospital administrators of New England the latest ideas in hospital equipment and furniture.

The adoption of the new By-Laws of the American Hospital Association has placed additional work on this geographic section of the parent organization. Special committees in each of the New England States will be working through the balance of this year to perfect their state organizations in line with the new By-Laws. Their activities will be coordinated by a special committee of the New England Hospital Association.

The newly elected officers of the New England Hospital Association are:

President—William O. Rice, M.D., Rhode Island Hospital, Providence, Rhode Island

Vice President—Warren F. Cook, New England Deaconess Hospital, Boston, Massachusetts

Treasurer—Oliver G. Pratt, Salem Hospital, Salem, Massachusetts

Secretary (appointed by the Trustees)—Albert G. Engelbach, M.D., Cambridge Hospital, Cambridge, Massachusetts

Trustees:

Harmon P. B. Jordan, M.D., Providence Lying-In Hospital, Providence, Rhode Island

Celia E. Brian, R.N., Brattleboro Memorial Hospital, Brattleboro, Vermont

Joelle C. Hiebert, M.D., Central Maine General Hospital, Lewiston, Maine

Wilmar M. Allen, M.D., Hartford Hospital, Hartford, Connecticut

W. Franklin Wood, M.D., McLean Hospital, Waverley, Massachusetts

Iowa Hospital Association Convention

The Iowa Hospital Association will hold its Ninth Annual Convention at Hotel Burlington, Burlington, March 28, 29, and 30. Meeting concurrently with the Iowa Hospital Association are the Iowa League of Nursing Education, the Iowa State Dietetic Association, and the Iowa State Record Librarian's Association.

The first meeting of the association will be the luncheon at 12:00 noon, March 28, at which Charles Danforth, president of the Burlington Rotary Club will preside. The invocation will be delivered by Reverend William T. Smith, pastor of First Methodist Church, Burlington, and Honorable Max Conrad, mayor of Burlington, will deliver the address of welcome. Reverend Clinton F. Smith, administrator of Grant Hospital, Chicago, and president of the American Protestant Hospital Association, will be the guest speaker.

F. P. G. Lattner, president of the Iowa Hospital Association, will preside at the Monday afternoon meeting. This will be a business meeting and reports of the various committees will be presented.

The Monday evening program will be held at the Auditorium, Mercy Hospital, with Sister M. Alberta, St. Bernard's Hospital, Council Bluffs, presiding. The invocation will be delivered by Reverend Leonard Brugman, St. Paul's Catholic Church, Burlington. At this meeting a panel discussion on "Publicity and Public Relations," will be participated in by Clinton F. Smith on "Financial Campaigns"; Erwin C. Pohlman, superintendent of Decatur and Macon County Hospital, Decatur, Illinois, on "Personnel Relations"; Alden B. Mills, managing editor of *Modern Hospital*, on "House Organs and Annual Reports," and Tracey Garrett, editor of Hawkeye-Gazette, Burlington, on "Newspaper Publicity." This session will close with a round-table discussion led by Dr. A. F. Branton, Willmar Hospital, Willmar, Minnesota, immediate past-president of the Minnesota Hospital Association.

Mabel Henry, superintendent, W. C. Graham Protestant Hospital, Keokuk, will preside at the Tuesday morning session. The session will be addressed by Howard E. Bishop, administrator of Robert Packer Hospital, Sayre, Pennsylvania, and president of American College of Hospital Administrators, on "Training the Hospital Administrator and the Obligation of Our Hospitals in This Training." There will also be a round-table discussion divided into three groups: first, for hospitals of twenty-five beds or less, led by Dr. A. F. Branton and assisted by Orville Peterson, superintendent of Hawarden Hospital, Hawarden; second, for hospitals of twenty-five to seventy-five beds, led by Clinton F. Smith and assisted by Mrs. Grace Heller, superintendent of Sioux Valley Hospital, Cherokee; and third, for hospitals of seventy-five beds and over, led by Howard Bishop and assisted by T. P. Sharpnack, administrator of Broadlawns Hospital, Des Moines.

Reverend J. P. Van Horn, superintendent, St. Luke's Methodist Hospital, Cedar Rapids, will preside at the luncheon on Tuesday. This is a complimentary luncheon sponsored by the three local hospitals and the Chamber of Commerce. Elizabeth Lilly, hospital librarian of the Free Public Library, Burlington, will address the luncheon on "All Medicine Is Not in Pill-Boxes." Dr. Jack V. Treynor, chairman of the Iowa State Medical Society Committee on Medical Education and Hospitals, is on the program for a paper.

The afternoon session, which will be a business meeting, will be presided over by Mr. Lattner. The nominating, auditing, medical liaison, legislative, and group hospitalization committees will present their reports. Dr. Bert W. Caldwell, executive secretary of the American Hospital Association, will discuss the new Constitution and By-Laws of the American Hospital Association. At the close of this meeting two delegates and alternates to the House of Delegates of the American Hospital Association will be elected.

On Tuesday evening the annual banquet will be held in the main dining room. At the banquet the Matthew O. Foley Scholarship Award will be presented. Robert E. Neff, president of the American Hospital Association, will be the guest speaker.

On Wednesday morning there will be a joint session with the three allied organizations—Iowa State League of Nursing Education, Iowa State Dietetic Association, and Iowa Record Librarians' Association. R. J. Connor will preside at this meeting, which will be addressed by Dr. Harvey Agnew, president-elect of the American Hospital Association, on "Fitting the Hospital to the Community Needs." Florence H. Wesslund, president of the Iowa State League of Nursing Education, will lead a panel discussion and will be assisted by Fern W. Gleiser, president of the Iowa State Dietetic Association, and Mrs. Genevieve Hilger, president of the Iowa Record Librarians Association. The session will close with a round table led by Dr. Agnew.

A commercial exhibit will be staged, at which the latest exhibition of hospital supplies and equipment will be displayed.

Hospital Conference to Be Held at Sectional Meeting of the American College of Surgeons

The hospital conference of the Midwest Sectional Meeting of the American College of Surgeons, consisting of Illinois, Iowa, Michigan (Upper Peninsula), Minnesota, and Wisconsin, will be held at the Schroeder Hotel, Milwaukee, Wisconsin, March 29, 30, and 31.

Reverend H. L. Fritschel, administrator of Milwaukee Hospital, will conduct the panel discussion on Tuesday morning, the general theme of which is "The Organization and Management of the Small Hospital." Those who will participate in this discussion are Dr. Frederic A. Besley, professor of surgery of Northwestern University Medical School; Omer B. Maphis, superintendent of Bethany Hospital, Chicago; Charles A. Lindquist, managing officer of Sherman Hospital, Elgin; Caroline Herrl, superintendent of Waukesha Municipal Hospital, Waukesha; Dr. Josiah J. Moore, pathologist of Ravenswood Hospital, Chicago; Margaret Johnston, superintendent of Beloit Municipal Hospital; and Paul H. Fesler, superintendent of Wesley Memorial Hospital, Chicago.

Dr. Carl E. Black of Jacksonville, chairman of Illinois State Executive Committee, will preside at the Tuesday afternoon meeting. Papers will be presented by Dr. George Crile, Cleveland, chairman of Board of Regents of American College of Surgeons, on "Hospital Standardization in Its Relation to Surgery"; by Dr. Arthur Steindler, professor of orthopedic surgery, State University of Iowa College of Medicine, Iowa City, on "Individual Responsibility of Fellows of the American College of Surgeons in Actively Supporting the Hospital Standardization Program"; by Dr. George T. Pack, assistant clinical professor of surgery, Yale University School of Medicine and Cornell University Medical College, New York, on "The Role of the Hospital in the Care of the Cancer Patient"; by Dr. Edward L. Cornell, assistant professor of obstetrics of Northwestern University Medical School, and chief of Obstetrical Staff, Henrotin Hospital, Chicago, on "The Medical Staff's Responsibility for the Care of the Obstetrical Patient in the Hospital"; by Dr. R. C. Buerki, superintendent of Wisconsin General Hospital, Madison, on "Trends in Educational and Training Standards as Affecting Physicians, Nurses, and Others Having to Do with the Care of the Patient"; by Dr. Malcolm T. MacEachern, associate director of American College of Surgeons, on "Graduate Training for General Surgery and the Surgical Specialties"; and by Dr. Charles B. Puestow, assistant professor of surgery, University of Illinois College of Medicine and Illinois Post-Graduate Medical School, Chicago, on "Ways and Means of Securing Adequate Training in Surgery." The general discussion at the end of this meeting will be led by Dr. Eben J. Carey, Milwaukee, dean of Marquette University School of Medicine.

Tuesday evening, at the Auditorium of St. Joseph's Hospital, Dr. MacEachern will conduct a general round-table conference-discussion of hospital problems based on 100 problem questions submitted by hospital executives.

Wednesday morning, Joseph G. Norby, superintendent of Columbia Hospital, Milwaukee, will conduct a panel round-table conference on "Administrative, Professional, and Economic Problems as Related to the Care of the Patient." The subjects to be presented are "Increasing Hospital Revenue," discussion to be opened by William P. Slover, superintendent of Norwegian-American Hospital, Chicago; "Standardization of Hospital Furnishings, Equipment, and Supplies," by Arthur M. Calvin, superintendent of Midway and Mounds Park Hospitals, St. Paul, Minnesota; "Central Supply Service," by Rev. Clinton F. Smith, superintendent of Grant Hospital, Chicago; "Nursing Service," by Sister M. Dorothea, superintendent of nurses, Little Company of Mary Hospital, Evergreen Park, Illinois; "Food Service," by Ada B. Lothe, chief dietitian of Milwaukee County Institutions, Wauwatosa; "Air Conditioning in Hospitals," by Perry W. Swern, architect, Chicago; "Voluntary Service in Hospitals," by Sophie Yoerg, superintendent of Milwaukee Children's Hospital, Milwaukee; and "Information and Telephone Service," by Robert Jolly, Memorial Hospital, Houston, Texas.

Under the auspices of the Milwaukee Hospital Council, a conference of hospitals and allied organizations engaged in the care of the sick and prevention of disease will be held on Wednesday afternoon, with Reverend Fritschel presiding. Papers will be presented by Dr. John P. Koehler, commissioner of health, Milwaukee, on "Meeting Our Challenge—United Front Against Disease"; by Rev. Alphonse M. Schwitalla, S.J., president Catholic Hospital Association, St. Louis, on "Nursing Standards and the Grading of Schools of Nursing"; by Dr. Arnold F. Emch, executive director of Chicago Hospital Council, on "Employer and Employee Relationship"; by Dr. Wal-

ter C. Alvarez of Rochester, Minnesota, on "Nutrition—Importance and Interest to Hospitals and Allied Organizations"; by Dr. Hoyt E. Dearholt, executive director of Anti-Tuberculosis Association, Milwaukee, on "The Tuberculosis Challenge"; by Dr. George T. Pack of New York on "What Hospital and Allied Organizations Can Do to Fight Cancer"; and by Robert Jolly on "Present and Future Status of the Voluntary Hospital."

Motion pictures for hospital personnel will be shown in the English Room at 8:00 p. m.

Dr. Peter D. Ward, administrator of Charles T. Miller Hospital, St. Paul, Minnesota, will preside at the Thursday morning session, the general theme of which will be "Education and Training of Hospital Executives." Dr. Buerki will open the panel discussion with an address on "Need for Adequate Education and Training for Hospital Executives," and those who will participate in the discussion are Stuart K. Hummel, superintendent of Silver Cross Hospital, Joliet; Gerhard Hartman, acting executive secretary of the American College of Hospital Administrators; Dr. Bert W. Caldwell, executive secretary of the American Hospital Association, and editor of *HOSPITALS;* Sister M. Patricia, superintendent of St. Mary's Hospital, Duluth; Ray L. Amberg, superintendent of University Hospitals, Minneapolis; and Dr. A. F. Branton, administrator of Willmar Hospital, Willmar, Minnesota.

On Thursday afternoon, a conversation round-table conference will be held on "Your and My Medical Records Problems and How We Solve Them," with Edna K. Huffman, medical records librarian of Grant Hospital, Chicago, as co-ordinator; Dr. Buerki will conduct an administrative round-table conference.

On Thursday evening, a Community Health Meeting will be held, to which all hospital representatives and their friends are cordially invited.

Ohio Hospital Association Convention

The Ohio Hospital Association will hold its twenty-fourth annual convention at the Deshler-Wallick Hotel, Columbus, April 5, 6, and 7.

The Tuesday morning meeting will be a business session, at which will be submitted the reports of the standing committees of the association, together with a report of the executive secretary and the report of the district councils.

Olive Jane Brown, president of the Ohio Hospital Association, will preside at the luncheon meeting on Tuesday. Honorable Myron Gessaman, mayor of Columbus, will deliver the address of welcome, and Robert E. Neff, president of the American Hospital Association, will deliver an address on "Hospitals and the Changing Social Order."

Mary E. Yager, chairman of the Northwestern District Council, will preside at the Tuesday afternoon session, at which time a joint meeting will be held with the Ohio Dietetic Association. At this meeting Robert E. Neff will conduct a round table on "Dietetic Problems." James A. Hamilton, chairman of American Hospital Association Committee on Personnel Relations; Bertha E. Beecher, personnel director of Christ Hospital, Cincinnati, and Winifred McL. Shepler, personnel director of City Hospital, Cleveland, will address the session on "Personnel Management in Hospitals." Dr. M. F. Steele, superintendent of Grant Hospital, Columbus, and as chairman of the committee, will present the report of the State Relations Committee. Ada I. Leonard, superintendent of Middletown Hospital, Middletown, will address the session on "Community Help on Hospital Improvements." The session will conclude with a round table on "Accounting Problems," led by Harold B. Burr, City Hospital of Akron.

At the Wednesday morning session, Frank W. Hoover, chairman of the Northeastern District Council, will preside. Honorable J. W. Beall, member of the Industrial Commission of Ohio, will present the paper, "Administration of the Workmen's Compensation Law, Its Uses and Abuses." In a joint meeting with the Medical Record Librarians, Dr. Malcolm T. MacEachern will conduct a conversational round table discussion. Gerhard Hartman, acting executive secretary of the American College of Hospital Administrators, will address the session on "An Educational Program for Hospital Administrators."

Wednesday noon the exhibitors will give a luncheon for all the hospital and allied associations meeting in Columbus at that time.

Francis R. van Buren, chairman of the Southwestern District Council, will preside at a joint meeting with the Ohio Obstetric Society, at which meeting Dr. Philip F. Williams, chairman of the Maternal Mortality Committee of the Philadelphia County Medical Society, is the guest speaker.

At 3:00 o'clock Wednesday afternoon there will be a joint meeting with the Ohio Society of Medical Technologists, at which a round table on "Laboratory Problems" will be conducted by Dr. Benjamin S. Line, pathologist of Mt. Sinai Hospital, Cleveland.

Eva Ellen Janson, superintendent of Children's

Hospital, Columbus, will lead a round table on "What Does the Physiotherapy Department Contribute to the Hospital?" at a joint meeting with the American Physiotherapy Association at 3:30 p. m.

Dr. C. S. Woods, chairman of the Public Education Committee, and members of this committee will conduct a round table on "The Hospital and Public Health Education," at 4:00 p. m.

At 4:30 p. m., Dr. Malcolm T. MacEachern will address the session on "The Need of Licensing Hospitals."

The annual banquet will be held on Wednesday evening. Olive Jane Brown will be toastmaster. The address of welcome will be delivered by Honorable Martin L. Davey, Governor of Ohio. The officers of the national associations will be introduced, together with the officers of the affiliated associations.

The business session will be held on Thursday morning, and reports of the various committees will be presented. At this session the delegates to the American Hospital Association Convention will be elected; the new officers of the Ohio Hospital Association will be elected, and the newly elected officers will be presented.

At 10:30 there will be a panel round-table discussion on "Hospital Service Plans," led by John R. Mannix, University Hospitals, Cleveland. At 11:00, "Plant and Maintenance" will be the subject of discussion, over which Francis R. van Buren will preside. The speakers will be G. F. Stephens, intern in hospital administration, Christ Hospital, Cincinnati, and R. Starr Parker of Christ Hospital, Cincinnati. Celia Cranz, vice-president of the Ohio State Nurses' Association, will present "Nursing in the Hospital," and the final topic of the day will be "Report Economics Committee Survey," at which C. A. Hyre, Miami Valley Hospital, Dayton, will discuss "Collection Procedure."

Meeting with the Ohio Hospital Association are the Ohio Dietetic Association, the Association of Medical Record Librarians of the State of Ohio, the Ohio Nurse Anesthetists' Association, the Ohio Chapter of the American Physiotherapy Association, the Hospital Obstetric Society of Ohio, and the Ohio Society of Medical Technologists.

The convention will hold a commercial exhibit which will be of more than ordinary interest to those who attend. At this exhibit a complete display of hospital furniture and equipment will be shown. It will be one of the added attractions to a convention which annually brings together a large majority of those who are interested in hospital operation and administration in the State of Ohio, as well as neighboring states.

Second Annual Meeting of the Southeastern Hospital Conference

The Southeastern Hospital Conference was organized by the hospital people of the states of Virginia, North and South Carolina, Georgia, Florida, Mississippi, Tennessee, and Louisiana at the meeting in Atlanta in 1937.

The Southeastern Hospital Association will hold its Second Annual Conference in Birmingham, April 7, 8, and 9. The president of the association, C. L. Sibley, Alabama, together with the Program Committee, has arranged an interesting series of discussions and round tables for this meeting. It will attract a large attendance from the southeastern states, and promises to be one of the stronger regional hospital associations.

Program

Thursday, April 7

Morning Session

Presiding—C. L. Sibley, President, Southeastern Hospital Conference

INVOCATION

Dr. John Buchanan, Pastor, Southside Baptist Church, Birmingham

ADDRESS OF WELCOME

John Temple Graves, II

GREETINGS FROM ALABAMA HOSPITAL ASSOCIATION

A. C. Jackson, M.D., President of Alabama Hospital Association

ADDRESS

C. L. Sibley, President

INTRODUCTION OF GUESTS

THE VALUE OF CULTIVATING A COMMUNITY PRIDE IN THE MUNICIPAL HOSPITAL

Harry Smith, Columbus, Georgia

A LIVE LABORATORY

Nell Stockton, Birmingham

MANAGEMENT OF HOSPITAL SUPPLIES

Sister Lydia, R.N., Birmingham, Alabama

THE DIETITIAN, A MASTER SALESMAN

O. K. Fike, Richmond, Virginia

Thursday Afternoon

Presiding—T. F. Alexander, President, Florida Hospital Association

SOCIAL SECURITY ACT

A. J. Hockett, M.D., President, Louisiana Hospital Association, New Orleans

THE BUSINESS OFFICE
T. Dwight Sloan, M.D., St. Augustine, Florida

PROMOTION OF POPULAR INTEREST IN A COMMUNITY HOSPITAL
O. G. Pratt, Salem, Massachusetts

PRACTICAL STANDARDS OF MEDICAL SERVICE IN SMALL HOSPITALS
A. Street, M.D., President, Mississippi Hospital Association

ROUND TABLE
Conducted by Russell H. Oppenheimer, M.D., Atlanta, Georgia

Friday Morning, April 8

Presiding—L. C. Fischer, M.D., President, Georgia Hospital Association

PUBLIC RELATION IN SMALL HOSPITALS
Alden Mills, Chicago

COOPERATIVE ACTION AMONG HOSPITALS
John R. Mannix, Cleveland, Ohio

COST ACCOUNTING IN THE SMALL HOSPITAL
William A. Dawson, New York City

SOUTHEASTERN LUNCHEON—WINDSOR ROOM
Presiding—Fred Walker, Jacksonville, Florida

TRAINING IN HOSPITAL ADMINISTRATION (Five minute talks)
James A. Hamilton
John R. Mannix
Lewis E. Jarrett, M.D.
G. Harvey Agnew, M.D.

Friday Afternoon

Presiding—A. Street, M.D., President, Mississippi Hospital Association

ARRANGEMENT AND EQUIPMENT OF THE OPERATING ROOM THEATER
Annice Jackson, R.N., Birmingham, Alabama

MANAGEMENT OF THE ANESTHESIA DEPARTMENT OF A SMALL HOSPITAL
Alma Clyde Foust, R.N., Sheffield, Alabama

AUTOPSIES, THEIR VALUE AND TECHNIQUE OF OBTAINING
Lewis E. Jarrett, M.D., Richmond, Virginia

GENERAL ROUND TABLE
Conducted by James A. Hamilton, New Haven, Connecticut

SEPARATE MEETINGS OF STATE ASSOCIATIONS

Friday Evening

BANQUET AND DANCE
Toastmaster—James R. Garber, M.D., Birmingham, Alabama

GREETINGS FROM THE MEDICAL PROFESSION
James S. McLester, M.D., Birmingham, Past President, American Medical Association

ADDRESS
G. Harvey Agnew, M.D., President-Elect, American Hospital Association, Toronto, Canada

Saturday Morning, April 9

Presiding—A. C. Jackson, M.D., President, Alabama Hospital Association

LATEST TRENDS IN GROUP HOSPITALIZATION
Edward Groner, New Orleans, Louisiana

DUTY OF THE GOVERNING BOARD
Harris Burns, Birmingham, Alabama

ROUND TABLE ON GROUP HOSPITALIZATION
Conducted by John R. Mannix, Cleveland, Ohio
Discussion opened by Graham Davis, Duke Endowment, Charlotte, North Carolina

ELECTION OF OFFICERS

Texas State Hospital Association Convention

The Ninth Annual Convention of the Texas State Hospital Association will be held at the Rice Hotel, Houston, April 8 and 9.

The Friday morning meeting will be under the direction of C. E. Hunt, president of the Texas State Hospital Association. The invocation will be delivered by Bishop A. Frank Smith, Methodist Episcopal Church South, Houston. Mayor R. H. Fonville will deliver the address of welcome. The feature of the morning session will be the clinical demonstration, "Superintendent's Staff Conference," conducted by Robert Jolly, Memorial Hospital, Houston, and a round table conducted by Mrs. Martha P. Roberson, Medical and Surgical Hospital, San Antonio.

The luncheon on Friday will be held at the Rice Hotel, at which time Bryce L. Twitty, as chairman of the Legislative Committee, will present his report, and the general counsel of Austin, Honorable Philip Overton, will deliver an address. Dr. Bert W. Caldwell will extend the greetings of the American Hospital Association.

Friday afternoon a clinical demonstration on "Hospital Records" will be conducted by Mrs. Inet Gilbert, record librarian of Methodist Hospital, Houston, and Joseph S. Smith, general agent of the Aetna Life Insurance Company, Houston, will deliver an address on "Old Age Pensions and Unemployment Insurance for Hospital Personnel." This session will be concluded by a round table led by Robert Jolly.

The annual dinner of the association will be held on Friday evening at San Jacinto Inn. Dr. C. R. Buerki, superintendent of the Wisconsin General

Hospital, Madison, past-president of the American Hospital Association, and president-elect of the American College of Hospital Administrators, will be the guest speaker.

The Saturday morning session will be opened by Mrs. Elsie Maurer Kibbe, instructor of nursing education, University of Texas, Austin, who will present a paper on "Texas Schools of Nursing and University Credits." Gerhard Hartmann will present the greetings from the American College of Hospital Administrators. At this session the reports of the various committees of the association will be presented, the election of officers for the coming year will be held, and the new officers of the association will be inducted in their offices.

The association will make a tour of the Jefferson Davis Hospital, Saturday afternoon, under the direction of Dr. J. H. Stephenson, superintendent. This hospital is one of the finest municipal hospitals in the South, and has been completed recently.

Meeting concurrently with the Texas State Hospital Association are the Record Librarians of Texas, who will hold their third annual convention; the Texas State Association of Nurse Anesthetists, who will hold their third annual convention, and the Texas Association of Occupational Therapists, who will hold their fourth annual convention. All of these associations will present interesting programs.

Tri-State Conference

The Tri-State Conference (Virginia, South Carolina, and North Carolina Hospital Associations) will be held at Hotel Jefferson, Columbia, South Carolina, April 14, 15, and 16, following the Southeastern Hospital Conference in Birmingham, April 7, 8, and 9. Meeting concurrently with the hospital associations are the Dietetic Associations and Record Librarians of Virginia, North Carolina, and South Carolina.

This Conference is invariably well attended, and the assembly this year will be of more than ordinary interest to hospital people of the three states.

Program

(All Round Tables and Talks in the Convention Hall, Hotel Jefferson)

Thursday, April 14, 1938 (South Carolina Day)
Morning Session

11:00 A. M.

CIVIC RECEPTION AND PARADE
State Capitol to Hotel Jefferson

11:30 A. M.

ROUND TABLE
James A. Hamilton, F.A.C.H.A., New Haven, Connecticut

1:00 P. M.

GET-TOGETHER LUNCHEON
Hosts: South Carolina Hospital Association, Robert M. Cooper, President Columbia Chamber of Commerce, Presiding

Afternoon Session

Presiding—H. H. McGill, President South Carolina Hospital Association.

2:30 P. M.

COOPERATIVE ACTION AMONG HOSPITALS
John Mannix, F.A.C.H.A., Cleveland, Ohio

3:15 P. M.

ADMINISTRATIVE PROBLEMS OF THE DIETITIAN
Lenna F. Cooper, President American Dietetic Association, New York City

3:45 P. M.

EDUCATIONAL OPPORTUNITIES FOR NURSES IN OUT PATIENT DEPARTMENTS
Hattie E. Pugh, R.N., Richmond, Virginia

4:00 P. M.

DANGER AND VIRTUES OF GENERAL HOSPITAL CARE ASSOCIATIONS
B. C. Willis, M.D., Park View Hospital, Rocky Mount, North Carolina

5:00 P. M.

ADJOURNMENT

8:00 P. M.

BANQUET, MAIN DINING SALON
Hon. James H. Hammond, Toastmaster
INTRODUCTION OF DISTINGUISHED GUESTS
HOSPITAL GROWTH AND COMMUNITY RESPONSIBILITY
Robert E. Neff, F.A.C.H.A., President American Hospital Association

Friday, April 15 (North Carolina Day)
Morning Session

Presiding—M. E. Winston, President, North Carolina Hospital Association

9:30 A. M.

HOSPITALS AND THEIR RELATIONS TO THE INDUSTRIAL COMMISSION
E. B. Crawford, Greensboro, North Carolina

10:00 A. M.

THE FUTURE OF THE HOSPITAL RECORD DEPARTMENT
Jennie C. Jones, R.R.L., President, Association of Record Librarians of North America, Baltimore, Maryland

(*Continued on page* 122)

Something New

"WATCH THE BALL OF PROGRESS AS IT ROLLS"

WE are told by scientists that the power in atoms will bring vast changes into our lives when it is tapped. The sun burns up its substance at the rate of four million tons a second. This inexhaustible energy comes from inside the atom. Scientific guesses demonstrate that there is more than enough energy in the atoms of an ordinary lump of sugar to run the boiler-room of your hospital for a week. New ideas are the very life-breath of progress. That is why the descriptions of new inventions which come to us from manufacturers as announcements are always interesting. Each is like tapping energy from an atom. Improved hospital service is an accumulation of small new things which gradually and almost imperceptibly enter into the technique of our daily lives. This month-to-month chronicle of new products holds a world of interest to modern-minded, progressive administrators.

Versatility Plus Equipment What would you say is the most important mental qualification for a hospital superintendent? Sometimes we think it is versatility. To manage a building, to take care of daily disbursements and to plan for new equipment is enough responsibility for one person. But the hospital superintendent's work must go much further in his regular every day routine.

One minute it is a temperamental surgeon, next the head of the laundry or the mild but persuasive dietitian. Each interview calls for important decisions. Often there is a request from an influential friend of the board which calls for the utmost in tact. Tragedy stalks—comedy makes pathos. There is a veritable gamut of human equations to deal with successfully.

So it is a wise executive who secures the necessary funds and budgets to obtain the best of mechanical equipment throughout the institution. Good equipment contributes to efficiency. Think of the time and talk and small trouble to be saved when, for example, the laundry machinery is all that it should be.

Manufacturers of laundry machinery have made great strides in providing perfected service. We just received some descriptions of the line of Norwood Washers made by the American Laundry Machinery Company of Cincinnati.

You will be interested in seeing a technical description of what they call the American Norwood Cascade Washer—a full line for either the small or large laundry taking care of dry weight capacity from 25 pounds to 360 pounds. You will no doubt be impressed with the way they have contrived to bring about "quality washing in the minimum length of time."

Kudos for Baxter An industrial magazine called "Modern Packaging," each year conducts what they call the All-American Package Competition. The award in the Closure Group went to The Baxter Laboratories of Glenview, Illinois, who distribute their Vacoliter through the American Hospital Supply Corporation of Chicago in all the territory east of the Rocky Mountains. They are receiving congratulations from the package industry. The Vacoliter is a container and dispenser. Its utilitarian purposes, as well as symmetry of design, brought the prize. The Baxter people also have laboratories in College Point, New York; Toronto, Canada, and in Glendale, California.

Standardizing Thermometer Service The trend toward standardization of the equipment used in hospitals is more and more evidenced by what manufacturers are doing. Here comes the well-known house of Faichney of Watertown, New York, with a type of thermometer set which shows they are alert to the special problems presented by the progressive service hospitals are trying to offer. This kind of intelligence applied to hospital problems by manufacturers is one of the little things which count for so much in bringing about the perfection of service at which all hospital administrators are aiming.

They have introduced a new sterilizing jar which they call the Kaybud. The description shows that the thermometer is suspended in the sterilizing solution—no cotton necessary. The jar is made of pebble-finish glass with flared base and moulded metal cap so that it will not tip or spill the solution. Their Tempglass thermometers which

are the result of many years' research are, as they say, "as nearly unbreakable as glass can be." Markings will not come off because an indelible pigment is used. They have a triangle top to prevent rolling and for convenience when shaking down. The whole outfit gives the impression of good quality, accuracy and top grade handicraftmanship.

By the Pull of a Thread Surgical supervisors will be attracted by the recent announcement from A. W. Diack's laboratory at Detroit. Now you get the famous Diack Controls with pure white threads attached. A heavy thread, twelve inches long, facilitates removing the Control from the heart of the autoclave load. Immediately on conclusion of the sterilizing period you can know the autoclave efficiency, before the goods reach the surgery. White or black threads are available.

An Air Raid on Germs While this is being written, Dr. Harvey C. Rentschler and Dr. Robert James of the Westinghouse Company are preparing to demonstrate their new Sterilamp at the March meeting of the American Institute of the City of New York. Here is Ultraviolet light now being used in some hospital operating rooms to keep them germ-free. It is claimed that these illuminated tubes annihilate most of the germs in the air around the surgery. Experience during the past two years shows that postoperative infections are practically eliminated. Literature on this subject is becoming abundant. The lamps are being used commercially to sterilize drinking glasses in restaurants, and to destroy meat-spoiling molds.

Small Things Help Efficiency A philosopher has said that this would be a wonderful world if we could do as well today as we expect to do tomorrow. Your hospital equipped with all the new equipment you would like to buy today, could be your dream come true in efficiency. Very often we wait for the money to pay for big equipment which somehow always seems scheduled for tomorrow. We do not see the many small items which make for higher efficiency—things which can be bought today. Take a little thing like the draft under a door. For a dollar or two, in an entirely new way, you can stop a door draft, save fuel, and help to keep any room warm and comfortable. Raysteel Specialties, Inc., Terminal Tower Building, Cleveland, are demonstrating their new Sentry Stop-a-Draft. Fastened to door bottoms, it automatically lowers a fabric strip against the floor. Open the door and the strip springs up, so that it never rubs against floors or rugs. It comes in standard and special sizes, and in different finishes. It is easily attached to the bottom of the door. You can order them by mail.

A New Burnisher The next trip you make through your culinary department, watch the way your silver is burnished. The new machines are practically built to order for convenience. Nathan-Straus-Duparquet of Sixth Avenue and Eighteenth Street, New York City, send us a photograph of their new Brighton Burnisher. They call attention to some interesting features. Compact and portable, it is equipped with traction drive which makes it safe. It can be rolled under a kitchen table when not in service. It has a capacity of twelve to fourteen dozen pieces of flatware and produces a high lustre in five to seven minutes.

Inks for Marking Glassware If you ever have worries about labels on glassware, you will have some interest in the new inks for marking on glass, porcelain, and metal which have been developed by the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pennsylvania.

These inks, in both black and white, adhere to the surface when applied with a steel pen. If set by the application of moderate temperature they cannot be removed completely by ordinary scraping. It looks as though the need for resorting to the many expedient measures now being used for labeling could be jettisoned and this safe, dependable method adopted.

When Your Basement Leaks Anything that seems amazing creates a lot of interest. The mere fact that it does seem amazing, does not mean that it is ridiculous.

Regardless of how ridiculous it may seem, waterproofing against water pressure has been attained according to the FLEXROCK COMPANY of Philadelphia. They have developed a new product, in liquid form, which you mix with ordinary raw portland cement, and then simply roll it into a carrot shape with your hands and jam it in the leak or broken place regardless of whether or not there is a stream of water coming through. It will set in 30 seconds, stop the leak directly against hydrostatic pressure, and will be permanent, not a temporary repair.

M. BURNEICE LARSON, Director

Physicians — Hospital Administrators — Graduate Nurses — Dietitians — Technicians

Tell us...*write* us...that you want *pleasant*, understanding people, with minds that are trained and smart, hands that are skillful, wills that are eager and earnest

We *will* find them for you!

We'll find the finest men and women in the land, to give you personnel to make your hospital all and more than all you ever hoped for it.

You *need* not have less; you *can* have all of that and all that that would mean in finer, surer, greater work accomplished for every patient that would come to you.

The fame of all you do depends upon the nurses, doctors, surgeons that are yours. Steel and stone and modern ways have *much* to do but *less* than men and women. All the fiery, starry hopes and plans you have are as they'd never been.....unless your personnel has chins that tilt, and eyes that challenge every difficulty, and nimble, skillful fingers, and wisdom, and understanding, and eager intent, and comfortable pleasant ways.

You *can* have men and women such as those. We've spent our lives, have learned the ways to find them, have won their understanding faith and confidence. Write and ask for those you need. Tell us the kind you want. Finding them is our great work.

The MEDICAL BUREAU

55 E. Washington St.
The Top Floor of the Tower of the Pittsfield Building
CHICAGO, ILLINOIS

10:30 A. M.

KEEPING HOSPITALS OUT OF THE RED BY BASIC OPERATING PRINCIPLES

Stuart G. Aldhizer, Harrisonburg, Virginia

11:00 A. M.

COST ACCOUNTING IN THE SMALL HOSPITAL

William A. Dawson, United Hospital Fund, New York City

Afternoon Session

Presiding—James R. McLeod, Secretary-Treasurer, North Carolina Hospital Association

2:30 P. M.

THE COLLEGE OF ADMINISTRATORS—ITS IMPORTANCE

James A. Hamilton, New Haven, Connecticut

3:00 P. M.

COMMERCIAL DISEASES IN A GENERAL HOSPITAL

Robena C. Anderson, R.N., Richmond, Virginia

3:15 P. M.

HOW THE RURAL HOSPITAL CAN BEST SERVE ITS COMMUNITY

Evelyn M. Heath, R.N., Nassawadox, North Carolina

3:30 P. M.

CANCER CLINIC OF MISSION HOSPITAL

T. R. Huffines, M.D., Asheville, North Carolina

4:00 P. M.

IMPORTANT ASPECTS OF MEDICAL STAFF ORGANIZATION APPLICABLE TO EVERY HOSPITAL

E. W. Williamson, M.D., Chicago

Evening Session

Presiding—Lewis E. Jarrett, M.D., President, Virginia Hospital Association

8:00 P. M.

OPEN MEETING. PUBLIC CORDIALLY INVITED

HOSPITALS AND THE CHANGING SOCIAL ORDER

Robert E. Neff, F.A.C.H.A., President, American Hospital Association

Saturday, April 16

Morning Session

Presiding—M. Haskins Coleman, Jr., Secretary-Treasurer, Virginia Hospital Association

9:00 A. M.

ROUND TABLE DISCUSSION

John R. Mannix

James A. Hamilton

11:00 A. M.

VISITS TO HOSPITALS AND SIGHTSEEING

1:00 P. M.

OLD FASHIONED SOUTH CAROLINA BARBECUE AT LAKE MURRAY

Mid-West Hospital Association Convention

The Mid-West Hospital Association will hold its Twelfth Annual Convention at Hotel Kansas Citian, Kansas City, Missouri, April 21 and 22. This convention brings together the hospital people of Arkansas, Colorado, Kansas, Missouri, and Oklahoma, and will attract an unusually large attendance. The program, covering subjects of interest to hospital people at this time, is particularly well balanced.

The Mid-West Hospital Association will stage a very complete display of commercial exhibits at which the latest innovations in hospital supplies and equipment will be demonstrated.

T. J. McGinty, president of the Mid-West Hospital Association, will preside at the opening session on Thursday morning. The invocation will be delivered by Reverend Victor Spong, chairman, Board of Trustees, Trinity Lutheran Hospital, Kansas City, and Dr. Edwin H. Schorer, health director, Kansas City, will deliver the Address of Welcome. Greetings from the local committee will be presented by L. C. Austin, administrator of Menorah Hospital, Kansas City, and president of the Missouri Hospital Association. William S. McNary, business manager of the University of Colorado School of Medicine and Hospitals, Denver, will address the session on "Sportsmanship in Hospital Buying," and Dr. Peter D. Ward, superintendent of Charles T. Miller Hospital, St. Paul, Minnesota, will address the session on "The Importance of the Revision of State Hospital Association Constitutions and By-Laws to Conform with the New Membership Structure of the American Hospital Association."

A luncheon will be held on April 21, for hospital trustees and members of the Mid-West Hospital Association, over which Lee C. Gammill, superintendent of Baptist State Hospital, Little Rock, Arkansas, will preside. Alden B. Mills, managing editor of *Modern Hospital,* will be the guest speaker.

Dr. E. T. Olsen, president-elect of the Mid-West Hospital Association, and medical director and assistant superintendent of State University and Crippled Children's Hospitals, Oklahoma City, will preside at the Thursday afternoon meeting. Dr. C. Rufus Rorem, director of the Committee on Hospital Service of the American Hospital Association, will present a paper on "Group Hospitalization," which will be discussed by Ray F.

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Solutions must be made sterile, yes . . . but they must *stay* sterile until your patient receives them. To assure purity and sterility in the intravenous solutions you use, Baxter's Laboratories developed the Vacoliter . . . a container specifically designed to protect its contents from the ever present hazards of contamination, deterioration and change in pH value.

A strong metal cap seals your solutions in a vacuum until you are ready to use them. No one can tamper with the closure without leaving unmistakable evidence. Once opened, a Vacoliter can never be resealed. This is an added protection against damaged fluids. This is one of the many reasons you can use Baxter's Dextrose and Saline Solutions with confidence in their dependability. They come to you after their sterility and purity have been thoroughly tested.

Only Baxter's Solutions are Vacoliter protected. Add economy to these satisfying advantages and the three basic advantages of Baxter's Solutions stand tall and obvious: They are sterile and pure; they are economical; they are *convenient to use* in the patented Vacoliter, the first container-dispenser approved by the American College of Surgeons.

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THE AMERICAN HOSPITAL SUPPLY CORPORATION

CHICAGO NEW YORK

McCarthy, executive director of Group Hospital Service, Inc., St. Louis. Henrietta Froehlke, director of University of Kansas Department of Nursing, Kansas City, will present "Can the Educational Standards, as Recently Adopted by the National League of Nursing Education, Be Instituted in the Majority of Nursing Schools?" At the end of this meeting a round table on accounting will be conducted by Dr. Rorem.

The annual banquet will be held on Thursday evening, with T. J. McGinty presiding. The guest speaker for the evening will be H. Roe Bartle, scout executive, Kansas City Council for Boy Scouts of America.

The Friday morning meeting will be called to order by John O. Steel, superintendent of Davis Hospital, Pine Bluff, Arkansas. A round table on legislation will be conducted by Arden E. Hardgrove, administrator of the Norton Memorial Infirmary, Louisville, Kentucky. At 11:00 a. m. a business meeting of the Mid-West Hospital Association will be held, and reports of the various committees will be presented.

The Missouri Hospital Association will hold a luncheon business meeting, during which reports of the various committees will be presented.

Walter J. Grolton, superintendent of City Hospital No. 1, St. Louis, will preside at the Friday afternoon meeting. Papers will be presented by Myron Green, president of the Myron Green Cafeterias Company, Kansas City, on "Curtailment of Food Waste," and by Dr. T. R. Ponton, editor of *Hospital Management*, on "The Importance of Good Medical Records in the Hospital." This session will be closed by a round table conducted by Dr. Malcolm T. MacEachern, associate director of the American College of Surgeons, Chicago.

The Annual Tri-State Hospital Assembly

The Tri-State Hospital Assembly, which for the past several years has held its annual meeting at the Sherman House, Chicago, will meet at the Stevens Hotel, Chicago, May 4, 5, and 6. The Tri-State Hospital Assembly is composed of the Illinois, Indiana, and Wisconsin Hospital Associations and allied organizations.

The Assembly for 1938 will comprise twenty sections:

Hospital Executives
Hospital Trustees
Medical Staff Officers
Nurses
Clinical Pathologists
Bacteriologists
Laboratory Technicians
Radiological Technicians
Anesthetists
Physical Therapists
Occupational Therapists
Hospital Pharmacists
Hospital Dietitians
Medical Record Librarians
Medical Social Workers
Out-Patient Directors
Hospital Accountants
Hospital Housekeepers
Hospital Engineers
Hospital Auxiliary Members

The first section of the Assembly will be held at 10:00 a. m., Wednesday, May 4. The general theme of this section will be "The Personnel of the Hospital." Twenty minutes will be allotted to "Present Trends in Hospital Personnel Problems," and ten minutes each for discussion from the viewpoint of—

1 Survey of Hospital Personnel
2 Selection of Hospital Personnel
3 Allocation of Duties of Hospital Personnel
4 Working and Living Conditions for Hospital Personnel
5 Sick Leaves and Vacations for Hospital Personnel
6 Maintaining Morale of Hospital Personnel
7 Summary of Discussion

Wednesday afternoon will be given over to conferences of the twenty participating sections. From 4:00 to 5:00 p. m. each of the three state associations, as well as other participating organizations, will hold its business session.

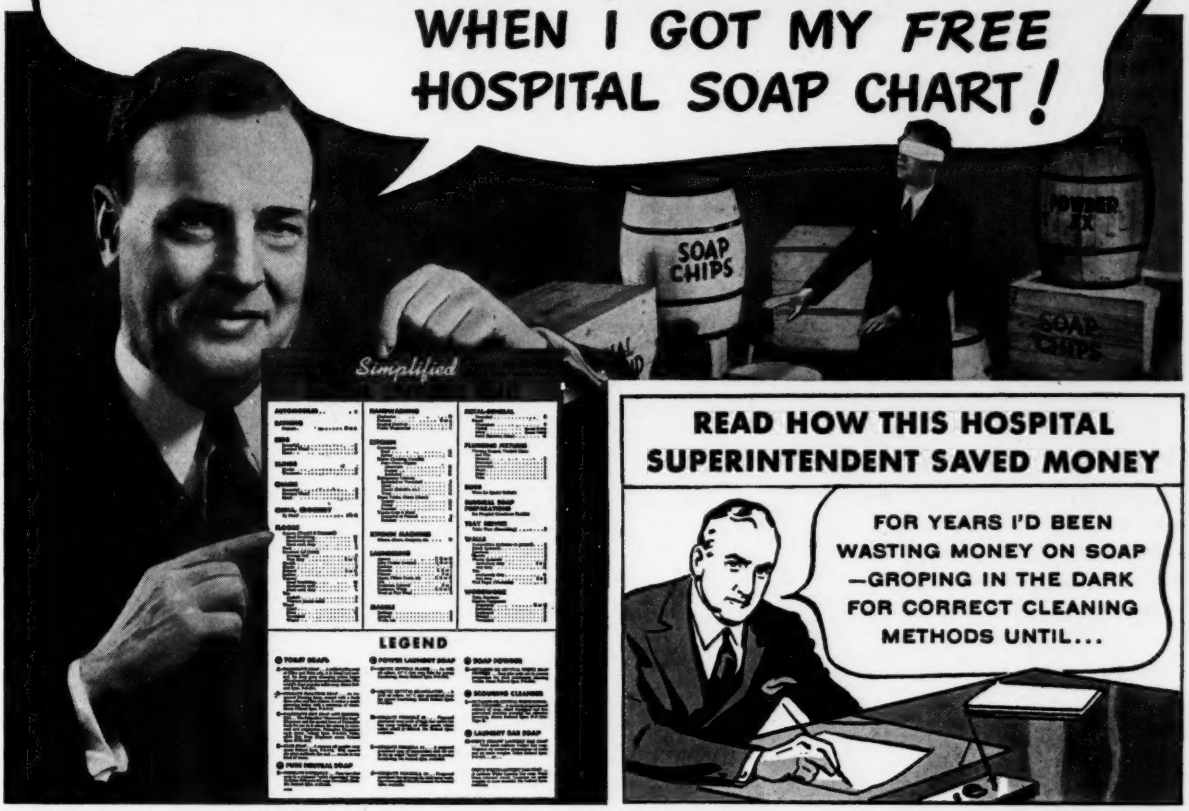
The Trustees' Session will meet at 8:00 p. m. Wednesday, and will be sponsored by the Chicago Hospital Council.

The morning session on Thursday will have for its general theme, "Maternal and Infant Welfare." Twenty-five minutes will be allotted to "The Care of the Mother and the Newborn in the Hospital," and eight minutes each will be allotted for the discussion from the viewpoint of—

1 The Responsibility of the Physician and the Hospital Management in Promoting Good Prenatal Care
2 Accommodations and Physical Facilities Necessary for the Good Care of the Mother and Newborn
3 Adequate Organization of the Obstetrical Department—
  a From the standpoint of Administrative Control
  b From the standpoint of Professional Control
4 Care of Infected Mothers
5 Necessity for Consultations

(*Continued on page* 126)

I QUIT PLAYING BLINDMAN'S BUFF WHEN I GOT MY FREE HOSPITAL SOAP CHART!



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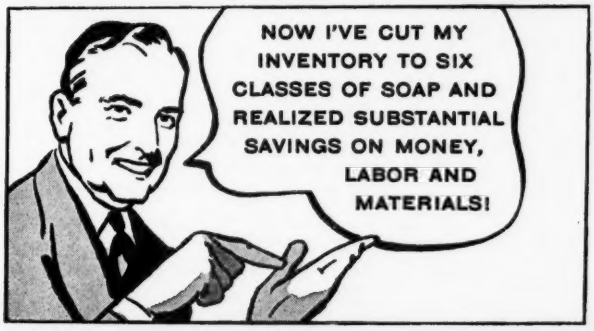
THE C. P. P. MAN PRESENTED ME WITH HIS COMPANY'S SOAP CHART. HE TOLD ME IT WOULD QUICKLY SOLVE MY CLEANING PROBLEMS... MAKE IT EASY TO PICK THE RIGHT SOAP FOR EVERY JOB, SO...



CHOOSE THE RIGHT SOAPS FOR LAUNDRY USE, TOO!

COLGATE-PALMOLIVE-PEET has soaps for every need... soaps that assure finer work... longer lasting linens ... at less cost. You'll find, too, that pound for pound, C.P.P. Special Laundry Soaps wash *more* clothes *better* than so-called "bargain" soaps.

When you ask for the Hospital Chart from your C.P.P. representative, also ask for full information about Colgate-Palmolive-Peet Laundry Soaps.

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6 What Constitutes an Adequate Obstetrical Record
7 Control of Obstetrical Morbidities and Mortalities
8 Delivery Room Safeguards
9 Nursery Precautions
10 Summary of Discussion

Thursday afternoon will be given over to conferences of the twenty sections.

The Annual Tri-State Hospital Assembly Banquet, sponsored by the Chicago Hospital Association and the Chicago Hospital Council, will be the feature of Wednesday evening.

On Friday morning the general theme will be "Nursing." Twenty-five minutes will be allotted to "The Present Status of Nursing Service and Nursing Education," and fifteen minutes each has been allotted for discussion from the viewpoint of—

1 The large hospital
2 The small hospital
3 The eight-hour day
4 The use of graduate versus undergraduate nurses
5 The use of nurses' aids or attendants
6 Grading of nurses' schools

Friday afternoon will be devoted to a Panel Round-Table Conference on "The Small Hospital."

Among the other general subjects to be discussed will be—

1 The Physical Plant, Maintenance, Services, Appearances
2 The Care of the Patient
3 The Voluntary Hospital
4 Public Relations
5 Appraising Hospital Services

The Tri-State Hospital Assembly will bring together the largest group of hospital people which will be assembled at any time during the year in the middle west. Dr. Malcolm T. MacEachern, chairman of the Program Committee, has developed a fine series of sections with an excellent program for discussion of the most emphasized subjects of interest to the hospital field today. Those who are participating in the program are leaders in the hospital field from both the United States and the Dominion of Canada. Every activity of hospital operation has been given a prominent assignment. One of the new features of the program is the summing up of each section's program by an editor of one of the hospital publications.

In addition to the program of papers, round tables, and detailed discussions, the Assembly will stage one of the most complete commercial exhibits it has ever assembled. All the exhibit space available in the Stevens Hotel has been arranged for this display.

An attendance of over two thousand is confidently expected. It is one of the hospital assemblies which no hospital person in the middle west can afford to miss.

The Twenty-Third Annual Convention of the Catholic Hospital Association of the United States and Canada

Under the patronage and by the invitation of His Excellency, The Most Reverend John A. Duffy, D.D., bishop of Buffalo, the officers and executive board of the Catholic Hospital Association of the United States and Canada announce that the twenty-third annual convention of the association will be held at the 174th Regiment Armory, Buffalo, New York, June 13 to 17, 1938.

Kentucky Hospital Association Meeting

The Kentucky Hospital Association held their annual meeting March 8, at the Kentucky Hotel, Louisville, Kentucky.

H. L. Dobbs, superintendent of the Kentucky Baptist Hospital and president of the Kentucky Association, gave the address of welcome. Dr. Hugh R. Leavell, director of health, welcomed the approximately 150 hospital executives to the city and the meeting.

The speakers on the morning program and their subjects were: Sister John Miriam, registered pharmacist at St. Joseph's Infirmary, Louisville, "The Advantages of Hospital Pharmacy"; Willie Lee Stephens, Norton Memorial Infirmary, "Making an Appeal to the Patient Through the Dietetic Department"; the Rev. Thomas B. Ashley, superintendent of Methodist Hospital, Pikeville, "Problems of the Small Hospital"; Alvena Soieth, Kentucky Baptist Hospital, "Demonstration of the Admitting Department," and Carrie Woods, superintendent of nurses at Norton Memorial Infirmary, "Nursing Care, Nursing Cost, and Eight-Hour Duty for Private Duty Nurses."

A. E. Hardgrove, assistant secretary of the American Hospital Association, spoke at the luncheon meeting, and Elsie L. Delin, superintendent of the Children's Free Hospital and chairman of the Hospital Day Committee, presented the Hospital Day program for 1938.

At the afternoon meeting the speakers were Frances Hooper, record librarian at the Jewish Hospital, "Medical Records Department and Getting the Doctors' Cooperation"; Lake Johnson,

ADVERTISING PAGES REMOVED

superintendent of the Good Samaritan Hospital, Lexington, "Purchase of Supplies"; Karl Rothrock, agent for the Deaconess Hospital, "Group Hospitalization," and Dr. William E. Fallis, "The Physician and the Hospital."

The highlight of the meeting was a round-table conference on "Problems of Large and Small Hospitals in Kentucky," conducted by Mr. Hargrove.

The meeting closed with the election of officers for the coming year and the nominating committee's report was as follows:

President—H. L. Dobbs, Kentucky Baptist Hospital, Louisville

President-Elect—Ed. J. Murray, M.D., Julius Marks Sanatorium, Lexington

First Vice President—Sister Alacoque, St. Elizabeth Hospital, Covington

Second Vice President—Sister Celeste Maria, St. Joseph's Hospital, Lexington

Secretary and Treasurer—J. T. Wheeler, Pewee Valley Sanitarium and Hospital, Pewee Valley

Trustees—

Elsie L. Delin, Children's Free Hospital, Louisville

Sister Anetta, St. Anthony's Hospital, Louisville

Paul Turner, M.D., Hazelwood Sanatorium, Louisville

Oregon Hospital Association of Hospitals

Wilson B. Coffey, business manager of the Dr. Robert C. Coffey Clinic and Hospital, Portland, was elected president of the Oregon Hospital Association of Hospitals at their annual meeting held on March 8.

Other officers elected for the 1938-39 term are:

Vice-President—T. A. Griffith, M.D., The Dalles Hospital, The Dalles

Secretary-Treasurer—Grace Phelps, Doernbecher Memorial Hospital, Portland

Directors—C. H. Manlove, M.D., Good Samaritan Hospital, Portland; William Gahlesdorf, Salem General Hospital, Salem; Mrs. Guy Mount, Oregon City Hospital, Oregon City

Coming Meetings

Georgia Hospital Association, Birmingham, April 7-9

Ohio Hospital Association, Columbus, April 5-7

Alabama Hospital Association, Birmingham, April 7-9

Florida Hospital Association, Birmingham, Alabama, April 7-9

Southeastern Hospital Association, Birmingham, Alabama, April 7-9

South Carolina Hospital Association, Columbia, April 11

Texas Hospital Association, Houston, April 8-9

North Carolina Hospital Association, Pinehurst, April 13

Tri-State Conference, (Virginia, South Carolina, and North Carolina Hospital Associations), Columbia, South Carolina, April 14-16

Mississippi State Hospital Association, Jackson, April 18

Mid-West Hospital Association, Kansas City, April 21-22

Missouri Hospital Association, Kansas City, April 21-22

Hospital Association of Pennsylvania, Pittsburgh, April 27-29

Tri-State Hospital Assembly, (Illinois, Indiana, and Wisconsin), Chicago, May 4-6

Kansas Hospital Association, Wichita, May 10-11

Arkansas Hospital Association, Fort Smith, May 16

Hospital Association of New York State, Buffalo, May 18-20

Minnesota Hospital Association, Minneapolis, May 19-21

Louisiana Hospital Association, New Orleans, May

New Jersey Hospital Association, Jersey City, June 2-4

Hospital Association of Nova Scotia and Prince Edward Island, Canada, June

Catholic Hospital Association, Buffalo, New York, June 13-17

Michigan Hospital Association, Marquette, June 23-24

Manitoba Hospital Association, Selkirk, Canada, June 23-24

Hospital Association of West Virginia, Charleston, August

National Hospital Association, Hampton, Virginia, August 14-16

American Protestant Hospital Association, Dallas, September 24-26

American College of Hospital Administrators, Dallas, September 25-26

American Hospital Association, Dallas, September 26-30

Children's Hospital Association, Dallas, September 26-30

National Association of Nurse Anesthetists, Dallas, September 27-29

Saskatchewan Hospital Association, Moose Jaw, October

Ontario Hospital Association, Toronto, October 19-21

American Public Health Association, Kansas City, October 25-28

Connecticut Hospital Association, November

The Hospital Book Shelf

A History of Women in Medicine

FROM THE EARLIEST TIMES TO THE BEGINNING OF THE NINETEENTH CENTURY. By Kate Campbell Hurd, Mead, M.D. Illustrated. 569 pages. The Haddam Press, Haddam, Conn. $6.00.

This is a book that has a place in the libraries not only of those persons interested in the history of medicine, but of those who are interested in the history and development of hospitals. Dr. Mead has given many years of painstaking research to the arduous task of tracing the influence of women physicians in the progress of medicine through the ages and in many lands. What she has found, or rather the gist of it, she presents in scholarly, readable, interesting fashion.

She quotes Neuberger (History of Medicine) as stating that during the third century B. C., hospitals for the sick and needy were built in every considerable city in India. Some of these stood for a thousand years and the foundations of some of those in Ceylon can still be traced. In Greece, during the period of the ascendancy of the cult of Aesculapius, hundreds of medical and quasi-medical institutions were established.

Interestingly enough, she shows Celsus, the Roman, second century, literary opponent of Christianity, as complaining that the private hospitals established by the Emperors Hadrian, Antoninus Pius, and Marcus Aurelius, and in which women physicians practiced, gave better service to their patients, many of whom were slaves, than was available in the public hospitals.

Under Haroun-al-Raschid (736-809) mosques were built in every important Arabian city. A part of the set-up of each mosque was a school and a hospital.

During the Middle Ages many hospitals were founded. One at Salerno, the famous center of medical education, was administered by the Knights of St. John of Jerusalem. During the period of the Crusades, hospitals were built in many Levantine cities. One in Constantinople, founded by Alexis Commenos, is said to have had 10,000 beds and was under the medical administration of his physician daughter, Anna.

Speaking of the French hospitals of the thirteenth century, Doctor Mead says in part:

"These hospitals built by Saint Louis, like those of Marguerite of Bourgogne, his sister, were of the type of the age, with high vaulted ceilings, long mullioned windows, and delicate carvings. They were supplied with water through lead pipes and properly drained, although excreta were carted off for fertilizer. Saint Louis also built a large hospital in Paris, and improved the Old Hotel Dieu so as to make it more sanitary and comfortable. In Montpellier there was so fine a hospital that its arcaded wards were taken as the model for many new hospitals in Italy and Germany; and, when Lanfranc went to England to reorganize the old hospitals of St. Bartholomew and St. Thomas, he did it according to the new plan."

Queen Isabella of Spain, patroness of Columbus, was a builder of hospitals. One of these she founded, at Santiago di Compostella, is still in existence—that is, if the civil war now going on has not put an end to it.

With the suppression of monastic orders and the confiscation of the property of the Church, during the reign of Henry VIII, many hospitals in England went out of existence. Mrs. Cellier, a famous English midwife, obtained the promise of King James II for the establishment of the regulation of midwifery and the building of a Royal hospital, but her efforts came to naught. Dr. Mead says—

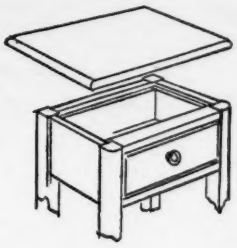
"She failed for want of enlightened public opinion and because of the timidity and lack of cooperation of the midwives themselves."

Of hospitals in the United States, Dr. Mead's book, quite naturally, has little to offer, because of the fact that there were few such institutions before the beginning of the nineteenth century, beyond which date her history does not go. She credits New Orleans with having the oldest American hospital, though, of course, she recognizes the fact that New Orleans was not an American city until after 1803, the date of the Louisiana Purchase. The Pennsylvania Hospital in Philadelphia was established in 1751, not 1756, as she suggests.

These are only a few of Dr. Mead's many interesting and informative references to hospitals. Nurses will find much in this book on the early history of nursing and members of various religious orders of women will find in it well-informed and appreciative comment on the work of their organizations.

John E. Ransom.

(*Continued on page* 132)



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The Hospital Book Shelf—(Continued)

SOCIAL HYGIENE. W. Bayard Long, M.D., and Jacob A. Goldberg, M.A., Ph.D., F.A.P.H.A. Lea and Febiger, Philadelphia. 1938. $4.00.

The removal of the veil of false modesty which has so long masked a rational study or effort at the control of syphilis and gonorrhea, has met with such a widespread interest that a comprehensive view of the entire subject within the grasp of the lay and non-medical worker is a definite need.

The nineteen contributors to this work are outstanding authorities on the different agencies they represent, and are able to give us in a single volume a close view of all the factors involved.

It would be too much to expect early complete control of these scourges, particularly in a large and highly democratic society, but since the bringing of the whole subject into the open this book is a valuable implement in the campaign of education and action which must be waged.

THE PUBLIC ASSISTANCE WORKER. Russell H. Kurtz, Russell Sage Foundation, New York. 1938. $1.00.

The field of public assistance has developed so rapidly in the last few years that even experienced social workers have found themselves at a loss in their efforts to meet the new problems presented.

The six chapters of this book, each written by an expert in the subject, succeed in presenting the problems in a form that will be of material value to all who are involved in this vital and far-reaching effort which promises to become permanent, and to establish a new profession all its own.

MENTAL HYGIENE FOR NURSES. Elizabeth Lee Vincent, Ph.D. W. B. Saunders Company. 1937.

The nursing curriculum is so much concerned with the physical sciences that the presentation of the principles of psychology on which mental hygiene must be based must be in simplified and concise form. Dr. Vincent has achieved this objective and presents a text which will not only be welcomed by instructors and supervisors in schools of nursing, but which will be of great value to pupils in the application of its principles to their own lives and problems.

PROCEDURE FOR HOSPITAL COSTS. William A. Dawson, Consulting Accountant, The United Hospital Fund of New York, 1937. Price $1.00.

Prepared by a committee of accountants sponsored by the United Hospital Fund, this manual sets forth the procedures by which accurate departmental and unit costs can be computed as a basis for comparing the costs of similar institutions or of measurement of the costs of departments, divisions, or units of a single institution.

THE COLLAPSE THERAPY OF PULMONARY TUBERCULOSIS. John Alexander, M.D., F.A.C.S. Charles C. Thomas, Baltimore, Maryland, 1937. Price $15.00.

This seven hundred page monograph gives a very exhaustive survey of the present status of collapse therapy, its method and its results. It is profusely illustrated from drawings, photographs, and reproductions of roentenographic plates, and includes a forty-page bibliography.

FIVE HUNDRED WAYS TO GET MORE FOR YOUR PAYROLL DOLLAR. J. O. and Crete Dahl. M.S. The Dahls, Stamford, Connecticut. 1937. Price $2.00.

A practical manual of all phases of practical personnel management, written primarily for hotels, but equally applicable to the service departments of the hospital.

PNEUMONIA AND SERUM THERAPY. Revised Edition. Frederick T. Lord, M.D., and Roderick Heffron, M.D. The Commonwealth Fund, New York. 1938. $1.00.

The rapid development of improvements in the serum therapy of pneumonia and the very definite movement to extend its benefits to the less well supplied areas of the population give to this book a specially fertile field.

This monograph is in effect a manual of the sero-therapy of pneumonia, giving not only the clinical and bacteriologic considerations involved, but careful instructions in techniques to be observed and results to be expected.

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News Notes

Edward C. Ames, assistant professor of English in the University of Toledo, has been named executive secretary of the Hospital Service Association of Toledo, Ohio.

Joseph R. Blalock, M. D., New York psychiatrist, has been appointed superintendent of the Southwestern State Hospital at Marion, Virginia to succeed *Dr. George A. Wright* who resigned.

Fern Cox, former superintendent of Parkview Hospital, Plymouth, Indiana, has been appointed superintendent of the Christian Hospital, Valparaiso, Indiana. Miss Cox succeeds *Ethel Ammerman,* who resigned to enter private nursing.

Bertha Gemberling has resigned as superintendent of the Fairbury Hospital, Fairbury, Illinois. *Irene Householder* is acting as temporary superintendent.

Marie C. Gobel of La Crosse, Wisconsin, has been appointed superintendent of Marion General Hospital, Marion, Indiana.

Francis C. Leupold has been appointed superintendent of the Jamaica Hospital, Jamaica, Long Island, New York.

George M. Simmonds, M.D., former assistant chief surgeon at the Shamokin State Hospital, Shamokin, Pennsylvania, has been named head of the institution to succeed *Dr. Robert Y. Grone.*

Grace A. Warman is principal of the school of nursing and superintendent of nurses at Mount Sinai Hospital, New York City. *Harriet L. Beek* succeeds Elizabeth K. Foote at Mount Sinai Hospital, Philadelphia, *not* New York City, as it was announced in the March issue.

Elizabeth Williams of Johnstown, Pennsylvania, has accepted a position with the Shenandoah Hospital, Inc., Roanoke, Virginia.

Guy W. Williams, M.D., for the past twenty years superintendent of the Cleveland State Hospital, Cleveland, Ohio, was transferred to the Lima State Hospital, Lima, Ohio, as superintendent. Dr. Williams will be succeeded by *Dr. R. E. Bushong,* who has been in charge of the Lima institution.

Robert B. Witham, director of Children's Hospital, Denver, Colorado, has accepted a position with The Leahi Home Hospital, Honolulu, Hawaii.

Chatham, Ontario, Canada—A renovation and improvement program which will cost $100,000 is being planned for the Public General Hospital of Chatham, Ontario.

Oroville, California—A new project for completion of the county hospital at Oroville, California, has been approved at Washington.

San Fernando, California—Work has been started on the addition to the Veterans' Hospital at San Fernando, California. The new unit will provide space for 100 beds which will bring the total capacity of the hospital to approximately 350 beds.

Tulare, California—A new 34-bed municipal hospital will be erected in Tulare, California. The city council has approved the $85,000 bond issue to finance building and equipping the hospital.

Denver, Colorado—A two-story brick and concrete addition to the Colorado General Hospital, Denver, Colorado, will be used by the out-patient department. Funds for the construction of the building will be obtained from a one-mill tax levied for the construction of state buildings.

Shelton, Connecticut—Plans have been completed and bids are being received on the proposed fireproof addition to the Laurel Heights State Tuberculosis Sanatorium at Shelton, Connecticut. The seven-story addition, which will increase the capacity of the sanatorium to 500 beds, will cost $400,000.

Washington, D. C.—As a result of a survey of health conditions in Washington, D. C., construction of four new units to provide space for 850 additional beds at Gallinger Municipal Hospital has been urged as one of the major points in a six-year program for improvement of District health standards. The experts did not estimate the cost of the proposed hospital construction program.

Fort Lauderdale, Florida—The formal opening of the new 50-bed hospital at Fort Lauderdale, Florida, was held March 27. The hospital will be known as the Broward General Hospital.

Jacksonville, Florida—On March 1, St. Luke's Hospital, Jacksonville, Florida, opened 12 rooms in the new Memorial Building to the public. The 16 other rooms and cubicles for crippled children will be opened as soon as equipment is installed. The new building represents the outlay of approximately $100,000, and will add 65 new beds, bringing the total bed capacity to 240 beds.

Moultrie, Georgia—The sum of $50,000 has been promised by W. C. Vereen of Colquitt Coun-

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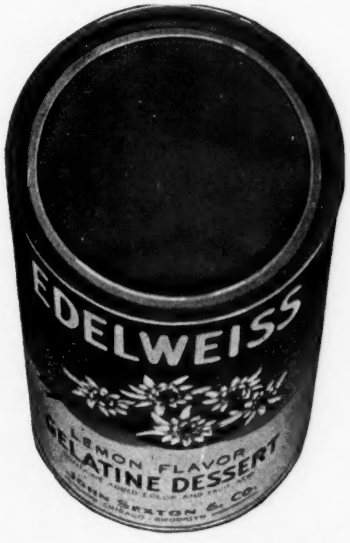

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ty for the construction of a new hospital at Moultrie, Georgia, providing the community will contribute a site and equipment. A temporary committee has been named to obtain a location for the Vereen Hospital and to undertake funds to equip the institution.

Chicago, Illinois—A campaign to raise funds to finance an improvement and development program has been launched by the directors of Grant Hospital, Chicago, Illinois. The complete program calls for the expenditure of more than $1,000,000.

Indianapolis, Indiana—Gifts aggregating more than $65,000 have been contributed recently to the James Whitcomb Riley Hospital for Children, Indianapolis, Indiana. Some benefactions were in the form of permanent endowments, others permitted immediate use of the money in any manner the board might direct. A third group requested that the gifts be made available for research or for some specific purpose.

Lexington, Kentucky—The new addition to the Veterans' Hospital located on the outskirts of Lexington, Kentucky, has greatly improved its facilities for the treatment of psychopathic cases and has practically doubled the capacity of the institution.

Louisville, Kentucky—The new $375,000 addition to the State Tuberculosis Sanitarium, Louisville, Kentucky, which will increase the bed capacity of the sanitarium from 72 to 148 beds will be opened to the public about the first of April. An allocation of $12,400 for the last three months of the fiscal year and $50,000 for next year for the operation of the annex has been made from state emergency funds. The addition was a PWA project.

Pineville, Louisiana—A celebration was held on March 5 in Alexandria and Pineville, Louisiana, to mark the beginning of the work on the hospital at Pineville which is part of a state-wide program to provide medical care for the needy citizens of Louisiana. The new Charity Hospital at Pineville will serve ten parishes in Central Louisiana.

Attleboro, Massachusetts—A formal request has been made to the trustees of the Bristol County Tuberculosis Hospital for an eight-room addition to relieve the present crowded conditions of the hospital.

Battle Creek, Michigan—The Leila Y. Post Montgomery Hospital, Battle Creek, Michigan, has purchased a new instrument which works upon the principle of the "electric eye." It is termed a photelometer. It will aid in greater accuracy in such laboratory determinations as the percentage of hemoglobin in the blood, the amount of sugar in the blood, and various similar laboratory procedures.

Flint, Michigan—The board of managers of Hurley Hospital, Flint, Michigan, has an $850,000 building program under consideration. The proposed plans will include enlarging the main building and the nurses' home, and the building of a new isolation unit or a combined isolation, tuberculosis, and psychopathic building.

St. Peter, Minnesota—The new detention unit of the St. Peter's State Hospital, St. Peter, Minnesota, which was erected in 1937, was opened for use recently. The St. Peter's Hospital was the first state hospital for the insane in Minnesota, it was founded in 1886.

Boonville, Missouri—The new diet kitchen unit at St. Joseph's Hospital, Boonville, Missouri, was dedicated recently as a memorial to the late Rev. Mother Agatha, O.S.B., one of the founders of the hospital. The new unit includes all equipment necessary for preparation of diet for patients, including a steam table, work tables and cabinets, refrigerators, stoves, automatic dish washer, food tray conveyors, and supplementary equipment.

Columbia, Missouri—The new cancer hospital to be built in Columbia, Missouri, will take over the supervision of the tumor clinic at Fulton. The personnel, which is headed by Dr. D. A. Robnett of Columbia, will remain the same.

Smithville, Missouri—Plans are being completed for the new hospital to be built at Smithville, Missouri.

Helena, Montana—The Louis W. Shodair unit of the Montana Children's Home and Hospital at Helena, Montana, was dedicated recently. The building of the unit was made possible by a gift of $90,000 from Louis W. Shodair of Los Angeles, California, a former Butte businessman. At the dedication Mr. Shodair gave an additional gift of $10,000.

East Orange, New Jersey—Construction of an addition to the Homeopathic Hospital, East Orange, New Jersey, will be started in April or May. The unit will increase the bed capacity of the hospital from 120 to 150 beds.

Jamaica, Long Island, New York—Plans for the Triboro Tuberculosis Hospital to be built at Jamaica, Long Island, have been announced by Commissioner S. S. Goldwater of the Department of Hospitals of New York. The hospital which

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will be erected at a cost of $3,000,000, will accommodate 530 patients and will contain extensive x-ray and surgical facilities.

New York City—In the will of Mrs. Harriet Brady Mathieu, a bequest of $25,000 was left to Misericordia Hospital, New York City, as a memorial to her son Glendyn Lionel Cloran. St. Vincent's Hospital received $5,000 as a memorial to her brother, Daniel M. Brady.

Westchester County, New York—A special committee, comprised of superintendents of hospitals in Westchester County, New York, will make a study of ways and means of establishing one rate for hospitalization in wards in Westchester institutions. At present, various rates are charged in the hospitals, and the Westchester Hospital Association feels that it would be of benefit to all institutions if a uniform rate could be agreed upon.

White Plains, New York—The sum of $817,049.14 was raised in the campaign which was conducted recently for funds to erect a new White Plains Hospital building. It is expected that ground will be broken for the new structure before the end of the coming summer.

Charlotte, North Carolina—A $40,000 gift from Mrs. W. S. Lee and her son, Martin Lee, for the erection of a memorial to the late W. S. Lee, Sr., has been given to the Presbyterian Hospital, Charlotte, North Carolina. The fund will be used for the 50-bed charity ward in the new hospital.

Davidson, North Carolina—One of the greatest needs on the Davidson College campus has been filled with the completion of a new $25,000 infirmary, the first of a series of new buildings to be constructed under the proposed Davidson Centennial plan. Money for the construction of the infirmary was anonymously donated last summer.

Winston-Salem, North Carolina—The chairman of the board of trustees of the North Carolina Baptist Hospital, Winston-Salem, North Carolina, has named a committee of citizens to conduct a campaign to raise funds with which to enlarge the hospital.

Watford City, North Dakota—Work has been started on the excavation work for the new community hospital at Watford City, North Dakota. The hospital is to be erected as a WPA project.

Columbus, Ohio—The formal dedication program of the Columbus Clinic, Inc., the new $80,000 diagnostic laboratory, of Mercy Hospital, Columbus, Ohio, was held recently. It included an inspection of the new clinic and its modern research apparatus, and a dinner at the nurses' home.

Piqua, Ohio—Plans for building an additional wing to the Piqua City Hospital, Piqua, Ohio, have been approved by the board of directors of the hospital. The addition will accommodate a 20-bed ward and a kitchen and dining room.

Port Clinton, Ohio—A 20-acre site in Port Clinton, Ohio has been purchased for the H. B. Magruder Memorial Hospital by the trustees of the memorial fund. The trustees have not announced any special plans for the hospital, excepting that the two-story stone dwelling which is on the property will be used for a nurses' home and the hospital to be built will have a 50-bed capacity.

Toledo, Ohio—Plans are being considered for the building of a new modern structure to house St. Vincent's Hospital, Toledo, Ohio. If the new structure is built the present building will be converted into an institution for incurables and contagious disease cases, with a wing devoted to mental cases for patients who do not desire to go to state hospitals.

Talihina, Oklahoma—The largest Indian hospital in the country, which has been under construction at Talihina, Oklahoma, since October, 1936, has been completed. Furnishings and equipment are being installed and it is expected the hospital will be ready for occupancy by June 30.

Welch, Oklahoma—The Bradshaw Hospital, which has been under construction at Welch, Oklahoma for the past six months, has been completed and will be opened to the public in the near future.

Allentown, Pennsylvania—A formal ceremony attended by prominent state and Lehigh Valley officials marked the starting of the $800,000 building program for the Allentown State Hospital, Allentown, Pennsylvania. Ground was broken for five new units to be erected on the site of the east side institution.

Butler, Pennsylvania—Bids were opened March 1, for the Western Pennsylvania Tuberculosis Sanatorium which is to be built near Butler, Pennsylvania. The latest estimated cost is $2,645,000.

Butler, Pennsylvania—A former Butler resident, A. H. Sarver, now residing in Detroit, has given $150,000 to the Butler County Memorial Hospital, Butler, Pennsylvania for the construc-

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Johnson & Johnson	New Brunswick, N. J.
H. L. Judd Co., Inc.	New York City
Kelley-Koett Mfg. Co.	Covington, Ky.
Kenwood Mills	Albany, N. Y.
Kent Company, Inc.	Rome, N. Y.
Samuel Lewis Co., Inc.	New York City
Lewis Manufacturing Co.	Walpole, Mass.
Marvin-Neitzel Corp.	Troy, N. Y.
Massillon Rubber Co.	Massillon, Ohio
Meinecke & Co.	New York City
The Mennen Company	Newark, N. J.
Midland Chemical Laboratories, Inc.	Dubuque, Iowa
Modern Hospital Publishing Co.	Chicago, Ill.
Morris Supply Co.	New York City
National Lead Co.	New York City
Parke Davis & Co.	Detroit, Mich.
Physicians' Record Co.	Chicago, Ill.
Puritan Compressed Gas Corp.	Kansas City, Mo.
Rhoads & Company	Philadelphia, Pa.
Rolscreen Co.	Pella, Iowa
Will Ross, Inc.	Milwaukee, Wis.
W. B. Saunders Co.	Philadelphia, Pa.
Savory Appliance, Inc.	Newark, N. J.
Scanlan-Morris Co.	Madison, Wis.
F. O. Schoedinger	Columbus, Ohio
Schwartz Sectional System	Indianapolis, Ind.
Ad. Seidel & Sons	Chicago, Ill.
John Sexton & Co.	Chicago, Ill.
Sharp & Smith	St. Louis, Mo.
The Simmons Co.	Chicago, Ill.
Snow-White Garment Mfg. Co.	Milwaukee, Wis.
Spring Air	Holland, Mich.
Standard Apparel Co.	Cleveland, Ohio
Standard Electric Time Co.	Springfield, Mass.
Standard Gas Equipment	New York City
Standard Sanitary Mfg. Co.	Pittsburgh, Pa.
Stanley Supply Co.	New York City
Sterisol Ampoule Corp.	Long Island City, N. Y.
Thorner Brothers	New York City
Troy Laundry Machinery Corp.	New York City
Union Carbide Co.	New York City
United States Hoffman Machinery Corp.	New York City
Vestal Chemical Laboratories, Inc.	St. Louis, Mo.
Vitamin Products Co.	Milwaukee, Wis.
C. D. Williams & Co.	Philadelphia, Pa.
Williams-Pivot Sash Co.	Cleveland, Ohio
Wilson Rubber Co.	Canton, Ohio
Zimmer Manufacturing Co.	Warsaw, Ind.

WHO COOPERATE TO SERVE MERIT YOUR SUPPORT

The Hospital Exhibitors' Association attracts a high type of membership. Your continuance of business relations with many of the individual concerns making up this membership list is positive evidence of the forthrightness of their business ethics.

Collectively—banded together in Hospital Exhibitors' Association—they constitute a force dedicated to the purpose of doing "a better job" of serving you. Realizing that more can be accomplished *faster*, through *united* effort, they have joined this association to contribute their part in the establishment of higher standards of quality, of more unified development, of more understanding relationship between commercial and hospital interests.

By supporting these companies, individually, you support this collective movement which has already proved its worth and value in many ways.

We invite you to submit inquiries to the Advisory Committee—a consultation body consisting of the Presidents and Secretaries of Hospital Exhibitors' Association, American Hospital Association and Catholic Hospital Association. Address care of this magazine.

HOSPITAL EXHIBITORS' ASSOCIATION

tion of a nurses' home. The gift is a memorial to his wife and daughter.

Erie, Pennsylvania—Construction on an addition to St. Vincent's Hospital, Erie, Pennsylvania will be started early in the spring as soon as weather permits.

Harrisburg, Pennsylvania—The eighty projects in the $65,000,000 Pennsylvania State improvement program will be under way by April 1. Building contracts include nine mental hospitals at an estimated cost of $14,572,000, and ten medical and surgical hospitals at a cost of $2,234,000.

Philadelphia—Approximately $21,000 has been subscribed in the campaign for $100,000 for the Frederick Douglass Memorial Hospital for Negroes in Philadelphia.

Pittsburgh, Pennsylvania—A majority of the members of the City Council of Pittsburgh have gone on record in favor of replacing the present Municipal Hospital, rather than construct a larger and more costly general hospital. If the decision is made in favor of the municipal hospital it will be financed through a $1,000,000 people's bond issue.

Pittsburgh, Pennsylvania—The Children's Hospital of Pittsburgh will share in the $760,000 estate of Mrs. Mary Marlin Fisher of Paul Smiths, New York, according to the will which was probated recently.

Smethport, Pennsylvania—Plans are being considered for the building of a 40-bed hospital for McKean County just outside the borough limits of Smethport, Pennsylvania—the county seat.

Warrington, Pennsylvania—The Horace Berk Memorial Hospital, Warrington, Pennsylvania has admitted its first ten "hopeful" mental cases. Four of the patients are too poor to pay for the care they will receive; six will pay up to $20 a week. This ratio will be maintained as the hospital expands to an immediately contemplated capacity of 100 beds.

Dr. N. W. Winkelman, neurologist and professor in the University of Pennsylvania Graduate School, with a committee of physicians and laymen organized the hospital with the conviction that a small hospital devoted exclusively to cases that appear curable and providing the best available treatment, could help reduce the number of mental patients in public institutions by a comparatively rapid "turnover" of patients.

The opening of the hospital was made possible by the committee, headed by Dr. Winkelman, raising $25,000, and the donation of a house on a 16-acre tract by Samuel Berk in memory of his son, Horace. The committee is soliciting 2500 annual memberships at $10 and $25 to support the institution which has been incorporated as a nonprofit organization.

Rock Hill, South Carolina—Plans are being submitted to the York County commissioners for a county hospital to be built at Rock Hill, South Carolina. Should the plans be approved, a bond issue of $50,000 would be sold to finance the construction of the hospital.

Seneca, South Carolina—The new 39-bed hospital for Oconee County which is being built just two miles from Seneca, South Carolina, is nearing completion and will be in operation by early summer.

Cheyenne Agency, South Dakota—After being closed for repairs for sixteen months the Cheyenne River Indian Hospital, Cheyenne Agency, South Dakota, has been reopened.

Dallas, Texas—Plans are being considered for the construction of an addition to the Methodist Hospital in Dallas, Texas. The tentative plans are for a seven-story building to be erected at a cost of $165,000.

El Campo, Texas—Plans and specifications have been prepared by C. A. Johnson, Houston architect, for the erection of a 50-bed hospital at El Campo, Texas. The building will cost approximately $75,000.

Liberty, Texas—Ground has been broken for the new wing to be added to the Mercy Hospital, Liberty, Texas. The hospital is conducted by the Sisters of St. Francis.

Terrell, Texas—Construction has started on a new unit for the accommodation of woman wards at the Terrell State Hospital, Terrell, Texas. The new unit will cost $110,000.

Selah, Washington—A site on the outskirts of Selah, Washington, has been approved by the state department of health for a $178,000 tuberculosis hospital to be built by Kittitas, Yakima, Benton, and Klickitat counties. The site was one of eighty-seven proposed.

Grafton, West Virginia—The citizens' committee of Grafton, West Virginia has made a proposal to the city commission to build a new $117,000 hospital to replace the present inadequate structure.

Monroe, Wisconsin—A four-story hospital with a capacity of 50 beds will be built at Monroe, Wisconsin by the Catholic Order of St. Agnes, which operates a hospital in Fond du Lac, Wisconsin.

ADVERTISING PAGES REMOVED

POSITIONS OPEN—(Continued)

ant are; anatomy and physiology, bacteriology, chemistry, personal hygiene, psychology, nursing arts, bandaging, hospital housekeeping; 5½ day week; month's vacation yearly; $200. No. 264, Medical Bureau, Pittsfield Building, Chicago, Ill.

NURSE—Night duty; must be capable of assuming complete responsibility of small hospital; Alaska; $160, quarters and transportation from Seattle. No. 265, Medical Bureau, Pittsfield Building, Chicago.

DIRECTORS OF NURSES—(a) Fairly large eastern hospital; competent organizer required. (b) Well-qualified woman with college degree, preferably 35-45, required; splendidly equipped hospital, located in residential section in one of California's most beautiful cities; institution well endowed; all-graduate staff. (c) General hospital; 150 beds; 35 students; preferably some one willing to assume responsibility of assistant to superintendent; southwest; $200, maintenance. No. 266, Medical Bureau, Pittsfield Building, Chicago.

ASSISTANT—Assistant superintendent and superintendent of nurses; 75-bed modern up-to-date splendidly equipped hospital; staff of 22 graduate nurses; no training school; $150, complete maintenance; New England. No. 267, Medical Bureau, Pittsfield Building, Chicago.

SUPERINTENDENT OF NURSES—(a) One of the finest hospitals in the southeast; unusual opportunity. (b) Fairly large hospital; nursing personnel of 150; 100 students; bachelor's degree required, master's degree desirable; midwest. No. 268, Medical Bureau, Pittsfield Building, Chicago.

HEAD NURSE—Operating unit of five rooms used mainly for major operations; graduate training in operating room technique required; university hospital; $90, maintenance. No. 269, Medical Bureau, Pittsfield Building, Chicago.

ADMINISTRATOR—Graduate nurse executive to take charge of 100-bed general hospital; excellently equipped

POSITIONS OPEN—(Continued)

institution; no indebtedness; splendid endowment; $3,000, maintenance; East. No. 270, Medical Bureau, Pittsfield Building, Chicago.

SOCIAL WORKER—Medical; large institution located in one of U. S. possessions; $150, including partial maintenance, car allowance, traveling allowance. No. 271, Medical Bureal, Pittsfield Building, Chicago.

NURSES—GENERAL DUTY—(a) County tuberculosis sanatorium; New York; $85, maintenance. (b) One of Chicago's leading hospitals; advantageous if candidate has had graduate training in obstetrics. (c) Comparatively new hospital, averaging 50 patients not far from New York City; $70, maintenance. (d) New county hospital; resort district; Michigan; $80, maintenance. (e) Large teaching hospital; 48-hour week; $65-$75, maintenance; East. (f) Fairly large hospital; 8-hour day, 6-day week; southern California. No. 272, Medical Bureau, Pittsfield Building, Chicago.

DIETITIANS—(a) General hospital averaging 285 patients and serving approximately 1500 meals daily; considerable experience required; $125, maintenance. (b) Assistant; fairly large hospital; $75-$90, maintenance. No. 273, Medical Bureau, Pittsfield Building, Chicago.

PHYSIOTHERAPISTS—(a) Assistant physiotherapist; university hospital; $90, maintenance. (b) Physiotherapist to head department, one of California's leading hospitals; $95, maintenance. No. 275, Medical Bureau, Pittsfield Building, Chicago.

TECHNICIANS—(a) X-ray and laboratory technician; small hospital; New York; $90, maintenance. (b) X-ray and laboratory technician; new department; small hospital; Wyoming. (c) Graduate nurse qualified in x-ray and laboratory work; new county institution; Michigan. (d) Graduate nurse qualified in laboratory work; routine duties, some research; private institution for nervous and mental cases; West. No. 276, Medical Bureau, Pittsfield Building, Chicago.

New Air Conditioning Unit with Five-Year Guarantee

Every once in a while a highly important announcement is made, without fanfare, in a simple and sincere manner. It seems to create a minimum of comment. Only a small group of people realize its importance. Such thoughts came to us recently in a modest hotel room in Chicago when officials of the Frigidaire Division of General Motors were giving an informal preview to demonstrate an entirely new air conditioner for the first time.

The equipment which has been used to supply conditioned air in small units has suffered from growing pains. Hospitals have experimented to some extent. Now Frigidaire with a completely new unit offers a five-year guarantee.

Here is what Frigidaire says about it:

"The new room conditioner is the first air conditioning equipment to incorporate the hermetically sealed, long-life, low-operating cost meter-miser which does away with belts, pulleys, stuffing boxes, connecting rods and oil pumps.

"Designed from the ground up in the air conditioning research laboratories of General Motors and the Frigidaire Division in Dayton, the new unit went into production in the corporation's air conditioning equipment manufacturing plant there and will be introduced to the public nationally early in April for pre-hot weather installation. It will market for $399.50 completely installed.

"As advanced in design as it is in mechanical principle, the new unit looks much like a console radio cabinet of extraordinarily compact size. It has finger-tip dial control, and cools, dehumidifies, cleans, circulates the air and provides year 'round ventilation. It is portable and requires no plumbing and no electrical or other installation work except the connecting of the power circuit and the fitting of an adjustable window section.

"The meter-miser mechanical unit provides such trouble-free operation that a five-year protection policy, the same type now covering Frigidaire electric refrigerators, is provided purchasers. This particular type of unit has proved its dependability and operating economy in more than a million household Frigidaire refrigerators.

"A new type comfort control governs cooling by the unit and prevents over-cooling of the space served. A new type air direction selector permits control of air movement through twist of a dial.

"The unit has a maximum cooling capacity equivalent to the use of 1,300 pounds of ice in a twenty-four hour period. The circulation of air through the filters cleans it of dust, dirt and pollen, a service that will be of benefit to many sufferers from hay fever.

"The personalized control of the unit makes it possible for a user to set the unit for his personal preference and thereby provide temperatures and humidities that promote the highest personal efficiency."